

TEXTILE BULLETIN

VOL. 65

OCTOBER 15, 1943

NO. 4

Complete, Modern
Equipment
•
Long Experience
•
A Thoroughly Reliable
Organization

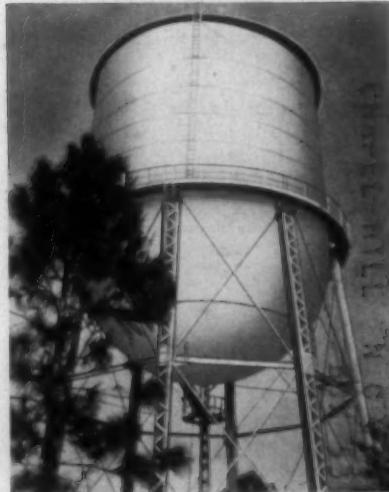
Mastering
**Complete
SERVICE FOR ELEVATED
WATER TANKS**
25 YEARS EXPERIENCE!

PROTECT YOUR INVESTMENT

BEFORE



AFTER



**Be Safe
Don't Gamble!**

A 100,000 Gallon Water Tank Holds Four Hundred Tons of Water, Which Is Equal in Weight to Four Large Railroad Locomotive Engines.

This weight is carried and balanced on four steel legs from 50 to 250 feet above the ground, so therefore, we suggest that you keep your tank in first class condition at all times to protect you and your fellow taxpayers from property damage and loss of lives.

Dixie Tank and Bridge Co. is one of the largest organizations of its kind in the industry. A completely equipped and efficiently operating reliable company, brings you competent tank maintenance at the lowest possible cost with full protection to you and your mill by carrying workmen's compensation and public liability insurance.



EACH UNIT IS A MACHINE SHOP ON WHEELS

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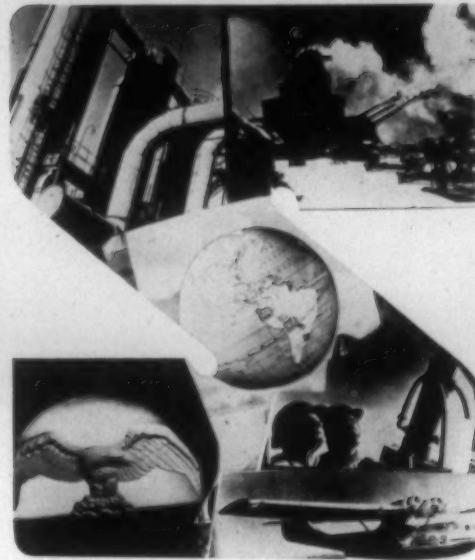
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INSTITUTE FOR RESEARCH IN
SOCIAL SCIENCE
AUG 14

A Traveler for Every Fibre



On land...on sea...in the air...
at the fighting fronts and at home—

TEXTILES

are playing an important part
in the March to Victory!

Uniforms, tents, bed clothing, or Red Cross bandages will never make the headlines that are rightly accorded the spectacular feats of the Flying Fortresses, the General Shermans, or our fighting ships, but nevertheless these textile products are just as essential to the winning of the war.

U. S. Ring Traveler Company is proud to be numbered among the manufacturers who are supplying the equipment needed to make these products, and we pledge the industry our close cooperation in its efforts to complete, on schedule, the enormous task it has been assigned.

U.S. RING TRAVELER COMPANY —

AMOS M. BOWEN, President and Treasurer

PROVIDENCE, R. I.

GREENVILLE, S. C.

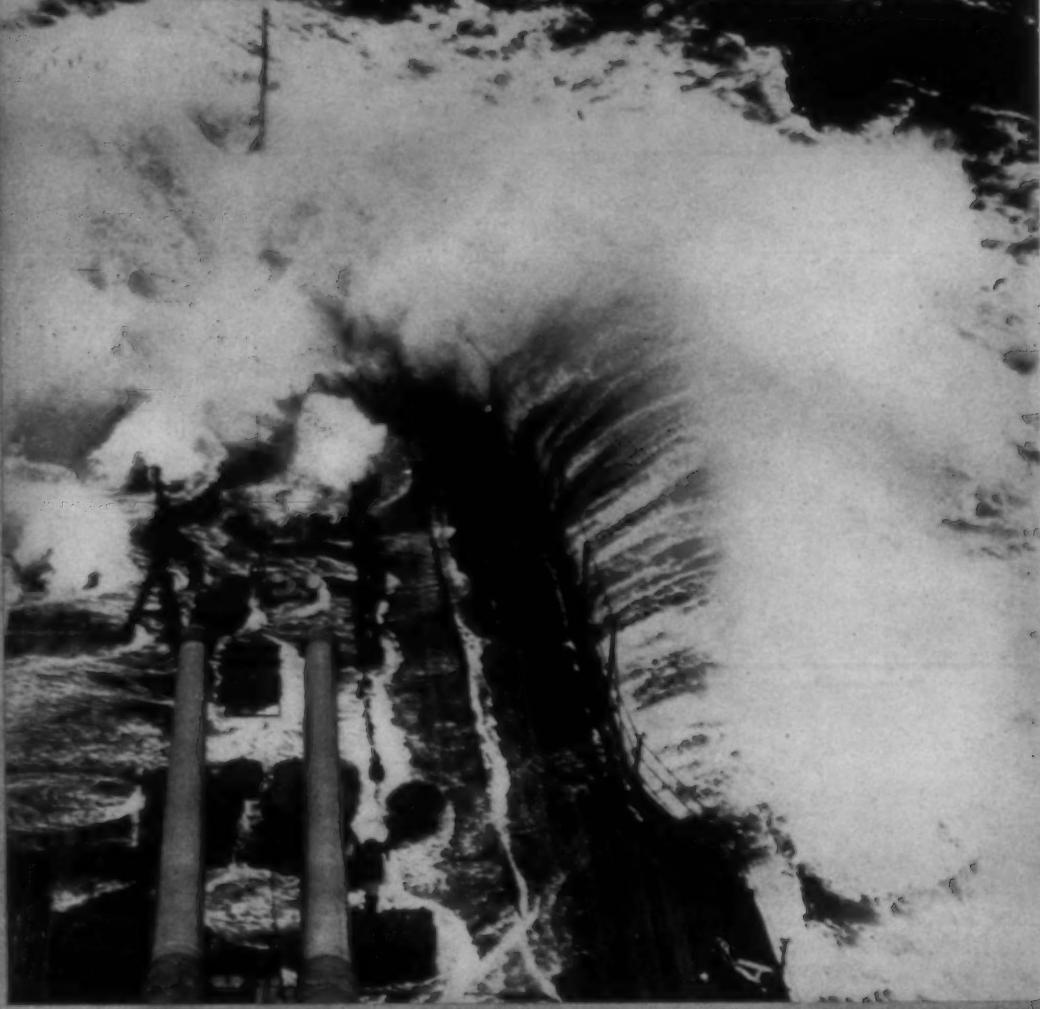


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INDEX TO ADVERTISERS — PAGE 38

Repel-O-Tex

SUPERIOR
WATER REPELLENT



OFFICIAL U. S. NAVY PHOTOGRAPH

onyx

Protecting Navy uniforms against moisture and dampness is an added essential provision for keeping Navy personnel, at sea or ashore, shielded from the elements.

The American Textile Industry in cooperation with Navy experts are producing the world's finest uniforms and quite obviously in-

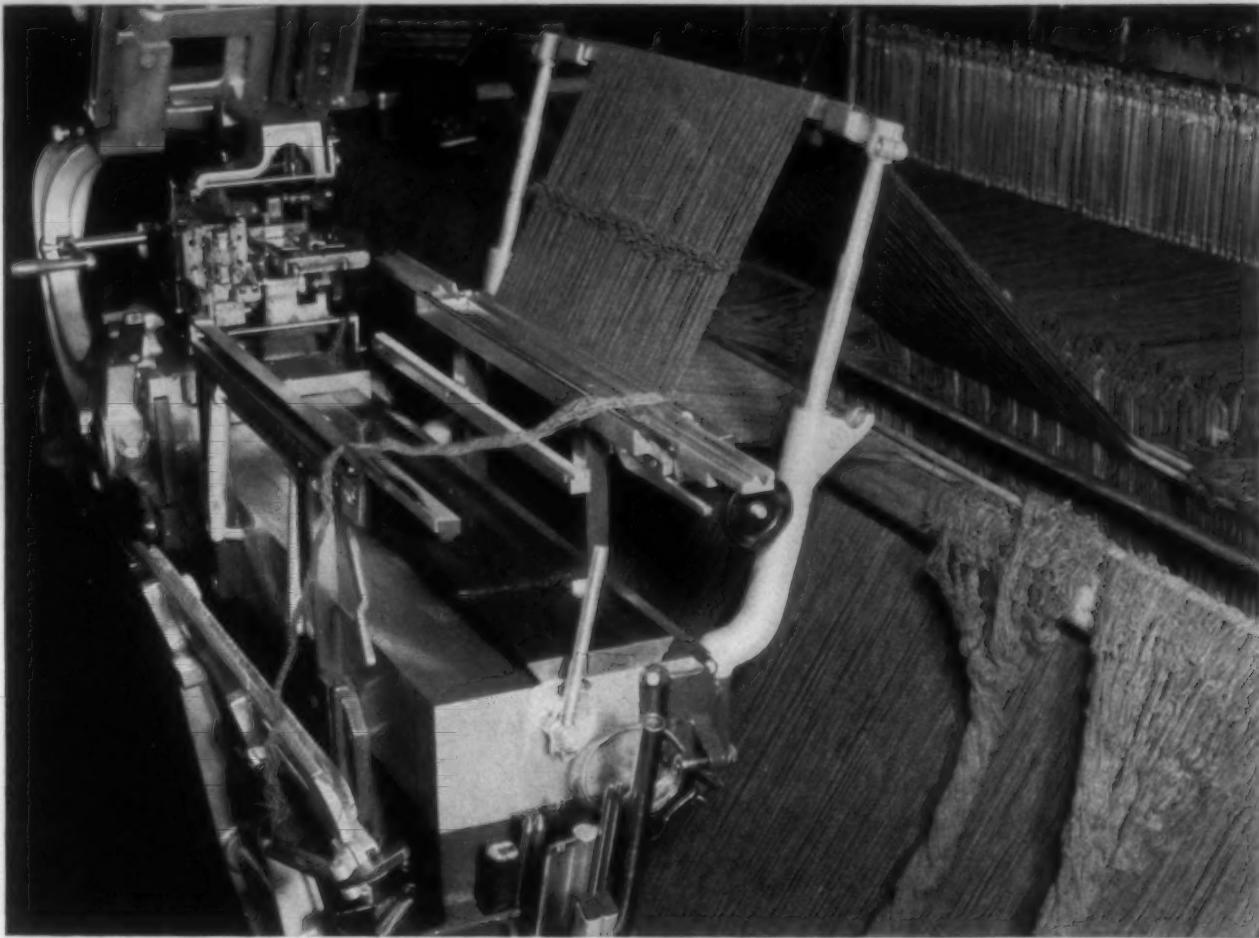
cluded in their uniform specifications—water repellency.

In the development and production of Repel-O-Tex, Onyx Research has contributed another outstanding product of exceptional merit, which is proving of considerable value in making Navy uniform fabrics—water repellent.

If you have a water repellent problem consult
Onyx Research. Your inquiries are solicited.

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY, N.J.

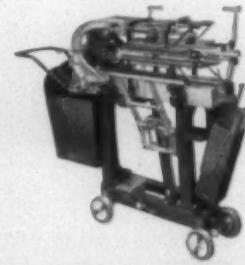
PROVIDENCE • CHARLOTTE • CHICAGO • LOS ANGELES • TORONTO • MONTREAL



Tying-In Wool Warp...at the Loom

ONE of the interesting features of the Barber-Colman PORTABLE Warp Tying Machine is the fact that it is adaptable to a wide range of fabrics. Four months ago in this publication we ran an advertisement showing it in use on rayon. Here is an application on a wool warp. This machine is compactly designed so it will work directly back of the loom in alleys as narrow as 12". It is light, sturdily built, and can be easily and quickly moved from one location to another. It is hand-operated and ties-in the warp in sections as shown, each section or load being approximately

15" wide. The knotting mechanism, which includes a "stumbler" to eliminate missing any ends, is normally operated at about 300 knots a minute. All parts are precision made to extremely close standards and are fully interchangeable. A good operator can be trained in a short time, requiring principally the ability to be careful and pay attention to significant detail. Note in the picture the uniform row of clean knots shown on the load which has just been completed. Bulletin F-1256-4, which will be sent promptly on request, will describe this machine to you in greater detail.



BARBER-COLMAN
Portable
WARP TYING
MACHINE

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • TWISTER CREELS • MOISTURE CONTENT CONTROLS

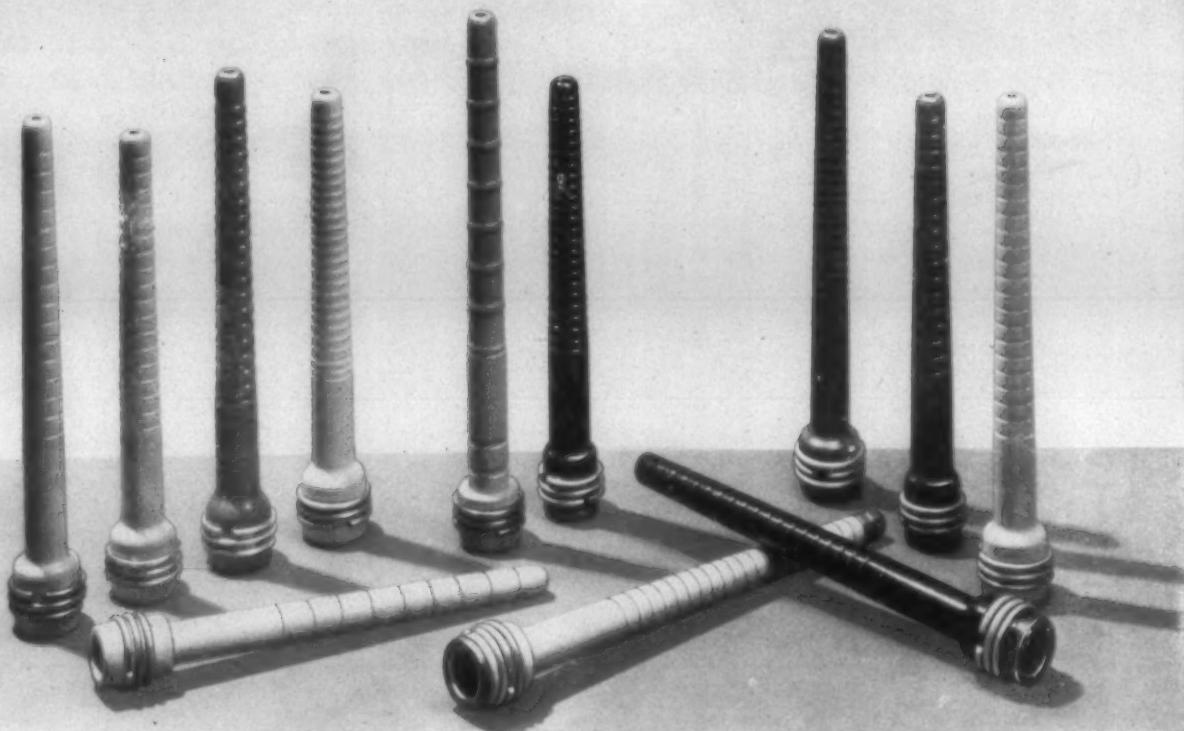
BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A.

GREENVILLE, S. C., U. S. A.

MANCHESTER, ENGLAND

WHY DIFFERENT FINISHES...



Must Suit Various Fibers and Various Conditions of Moisture, Heat and Steam!

U. S. Bobbins are made with the types of finish suited to specified working conditions for low, moderate and high relative humidity — for steam conditioning and Hygrolit processing.

For Wool and Worsted Yarns a finish of special oils combines with the natural oil in wool to oxidize and produce a hard, long-wearing surface.

For very fine cotton yarns and coarse deniers of rayon, our USSR finish produces a smoother surface. For fine deniers of rayon, particularly for soft yarns, such as low twist acetate, our USSRC finish provides highly polished surfaces which prevent filaments from catching during the winding and unwinding operations.

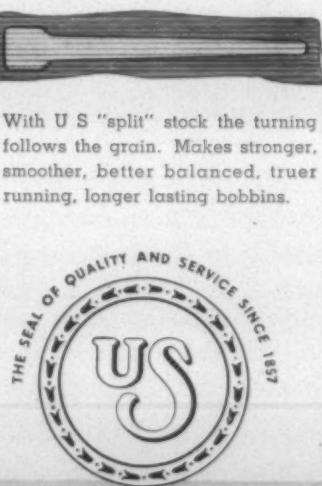
Where the Hygrolit Method is used to condition filling bobbins, our USSH Finish

has proved its value. For intermediate conditioning, US150 finish is suitable up to temperature of 150 degrees. U S Transparent Enamel is impervious to moisture and steam, provided the temperature does not exceed 200 degrees.

All U S Bobbins requiring conditioning are made from straight grain "split" stock, whether for dry or moist operating conditions, with or without metal bushings, shields and tips.

Ask our representative to outline mill economies obtainable with improved U S Bobbins and other U S Textile Accessories, including Shuttles, Spools, Cones, Rolls, Cardroom Bobbins, Skewers, and Tubes. Let him help you to speed up production and improve the quality of yarn and cloth at less cost for operation and maintenance.

U S Why No. 4. Watch for More U S Whys in these pages



US BOBBIN & SHUTTLE CO. LAWRENCE, MASS.

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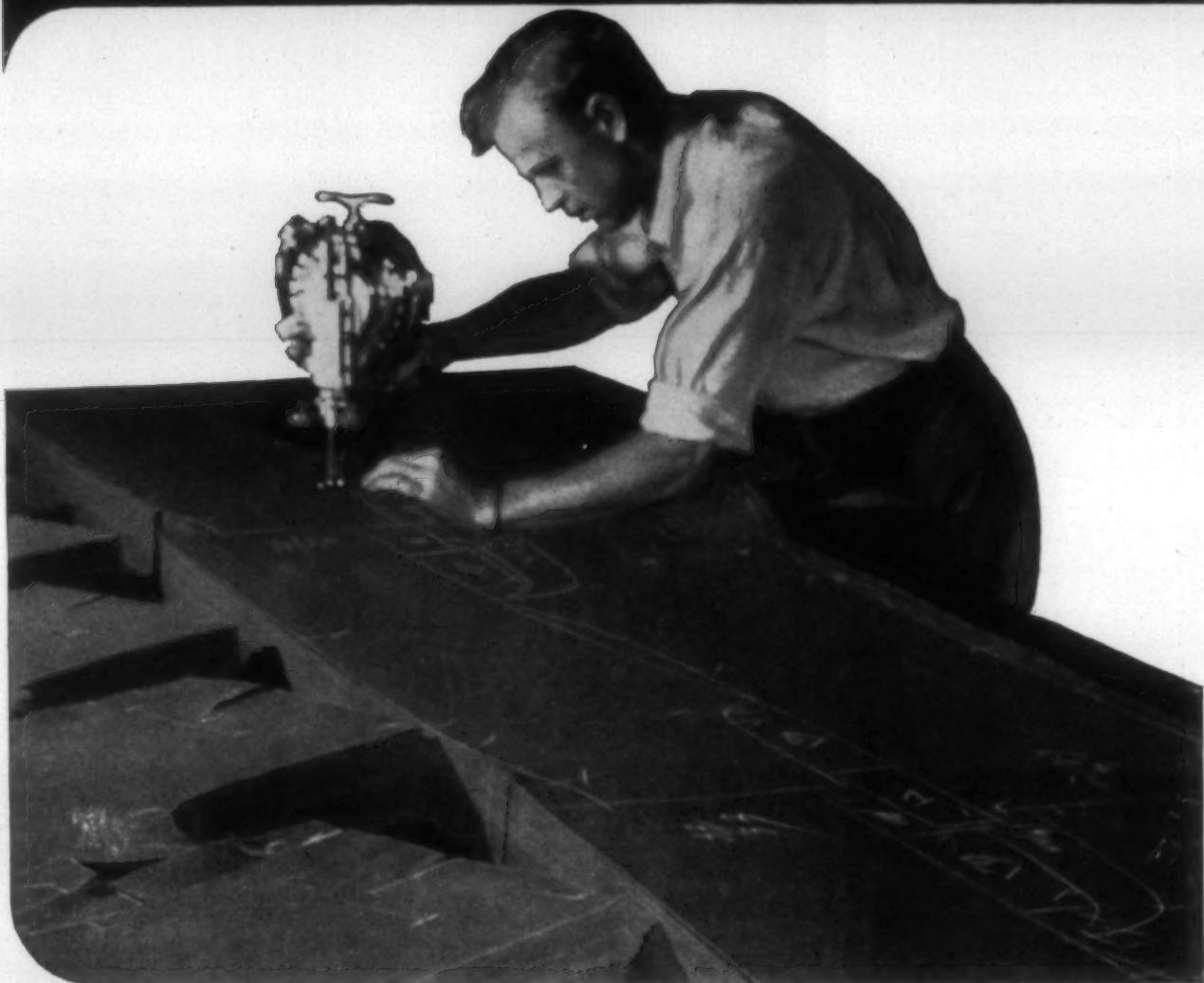
CHARLOTTE, N. C.

CHICAGO AGENT: Albert R. Breen, 20 E. Jackson Blvd.

ALABAMA AGENT: Young & Vann Supply Co., Birmingham

CANADIAN AGENT: W. J. Westaway, Montreal

There's a man-size job cut out for every American!



Yours is to produce—and fast—the unprecedented quantities of fabrics needed to equip our armed forces. Ours is to provide you with tough, long lasting, accurately made

O.W.I. Photo

War has doubled the textile output but is exhausting mechanical equipment at a rate far in excess of normal.

This is particularly true of card clothing—because *card clothing takes the rap*.

These conditions dramatize the need for quality. Tufferized Card Clothing is your assurance of top performance.



TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Headles

HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N.C. Branch Offices: Philadelphia, Dallas. Canadian Agents: Colwool Accessories, Ltd., Toronto 2



GENERAL COAL GOES TO WAR—

More than nine hundred of our men—miners, machinists, clerks, salesmen, engineers and executives have answered the call to serve in the armed forces. Those of us left behind gladly "Close Ranks" to keep the coal rolling.



GENERAL

Reg. U.S. Pat. Off.



High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.



High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.



High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.



A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.



Roda and Stonega from Wise County, Va., and Connellsville Coke from Pennsylvania.



High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.



Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.



Genuine New River Smokeless, Beckley or Sewell seam from Raleigh County, W. Va., C. & O. and Virginian Railroads.



Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.



Steam and domestic coals from a number of producing districts.

ANTHRACITE

Premium and standard qualities in the entire range of Anthracite burning characteristics.

Capable engineering personnel and the experience gained through long and varied marketing activity assures proper application of one of the above brands and effective servicing of any fuel requirement.

General Coal Company

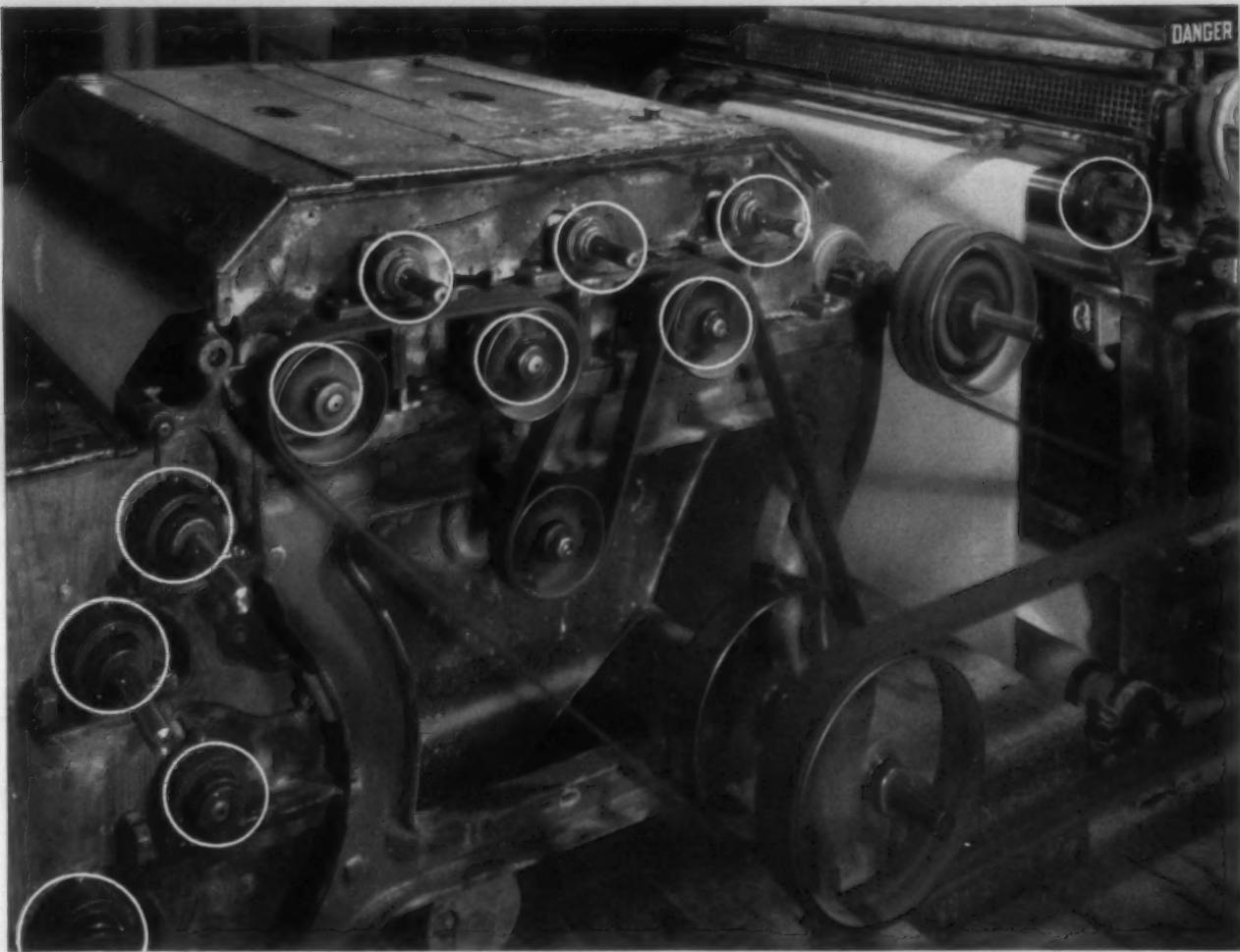
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Twin Trouble-makers . . . Now Harmless

Self-Aligning, Clean-running Fafnirs Offset Expansion and Contraction of High-speed Shafts . . . eliminate Oil-spattered Cloth

SPEED was one of the problems in this Cotton Mill working on war orders. They had to meet close production schedules . . . machines had to run "lickety-split" to keep up the pace. Due to high speeds and attendant heat conditions, oil or grease just wouldn't stay in plain bearings . . . and it damaged many yards of cloth.

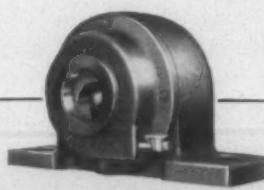
EXPANSION and CONTRACTION of high-speed shafts was another headache. A shaft out of line, or a bearing out of line . . . caused trouble. Under such conditions, any but the right type of bearing would have a very short life. When one bearing failed, production had to stop . . . and wait!

A Fafnir Engineer suggested Fafnir SAOL Type, Self-aligning Pillow Blocks as the solution for both problems!

The Fafnirs went in . . . on trial. Now . . . after more than 12 months on the job, the Fafnirs have proved themselves. They stand up under considerably greater speeds and loads than had hitherto been practical. Oil damage to cloth has been entirely eliminated.

The Fafnir Ball Bearing Units that answered the needs

of this mill are the result of Fafnir's engineering thoroughness. In the Textile Industry, as in other industries, Fafnir has made a careful study of the bearing problems of every type of machinery and equipment used. The resulting line of Fafnir Ball Bearings increases the efficiency of machines and equipment, cuts maintenance costs, and saves power consumption. The Fafnir Bearing Company, New Britain, Conn. Branch Offices: Atlanta . . . Birmingham . . . Boston . . . Charlotte . . . Dallas.



FAFNIR
BALL BEARINGS

THE BALANCED LINE - FOR ORDNANCE,
AIRCRAFT AND INDUSTRIAL MACHINERY

RAYON REPORTS

Presented Monthly by American Viscose Corporation, New York, N. Y.

OCTOBER, 1943

NEW AMERICAN VISCOSA LACING METHOD KEEPS SKEINS RIGHT SIDE OUT, IMPROVES WINDABILITY

The windability of a skein that has been dried wrong side out after dyeing or treating for twisting, is appreciably poorer than that of a skein which has been correctly handled. Large scale tests have shown that winding-room efficiency can be considerably increased if, when "dressing" skeins prior to drying, care is taken that they are all placed on the dryer rods right side out.

A method has been adopted whereby, in the future, all our skeined yarns will be laced with a "key" tie-

cose Corporation, this booklet describes the part that unending research has played in developing rayon yarns suitable for military uses.

To get your copy of "Rayon Goes to War" simply address your request to American Viscose Corporation, 350 Fifth Ave., New York 1, New York.

PLANT CONVERSION LOOKED UPON AS IMPORTANT POSTWAR STEP

The recent conversion of the rayon staple manufacturing facilities of American Viscose Corporation's Front Royal Plant to the production of "Avisco" is regarded as an important trend in the development of new fabrics in the postwar period.

This stronger viscose rayon staple has already become popular with outerwear manufacturers and with weaving technicians who are developing many new fabrics which are expected to run into considerable volume after the war.

Notable among these is rayon broadcloth which holds a strong place. Fine yarns spun from high tenacity rayon staple fiber can be used effectively in cloths of this type, thus giving these fabrics a greatly improved sales position in such primarily "washable" markets as men's shirtings, children's wear and intimate apparel.

Coincident with the increasing production of "Avisco" has been its reduced price. The price has already been reduced from 26 to 25 cents a pound.

AMERICAN VISCOSA PLANS TO EXPAND RESEARCH

American Viscose Corporation is consolidating all its basic research activities at Marcus Hook, Pa.

Heretofore, the company's research work on viscose and acetate rayon has been carried on at Marcus Hook and Meadville, Pa. Under the new arrangement, research on these two products, together with all other basic research, will be done at Marcus Hook. The men who direct the corporation's basic research activities will be

grouped together at this plant... resulting in greater efficiency and better all-around results.



Also, research facilities are to be considerably expanded, not only for increased work on the chemical aspects of rayon production, but also for more intensive experimental work and added pilot plant operations. This great expansion will mean greater benefits to the trade.

U. S. FIBER PRICES

According to a study conducted by the Department of Agriculture, the yearly average prices of the main textile fibers maintained in this country are as follows:

	1940	1941	1942	Jan. 1943
	(in cents per pound)			
WOOL (scoured)				
territory, fine	96.3	108.8	119.1	119.0
COTTON (15/16)	10.17	13.92	19.3	20.4
RAYON YARN				
(150 denier)	53.0	53.6	55.0	55.0
RAYON STAPLE FIBER				
Viscose 1½ denier	25.0	25.0	25.0	25.0
Acetate 5 denier	43.0	43.0	43.0	43.0

MAKE USE OF 4-PLY SERVICE

- 1 **PRODUCT RESEARCH**
Helps you get the right yarn.
- 2 **FABRIC DEVELOPMENT**
Helps you design new fabrics.
- 3 **TEXTILE RESEARCH**
Helps solve production and finishing problems.
- 4 **"CROWN"** TESTED**
Helps provide scientific selling facts.

AMERICAN VISCOSA CORPORATION

Producer of

CROWN® Rayon Yarns and Staple Fibers

Sales Offices: 350 Fifth Avenue, N. Y. C.; Providence, R. I.; Charlotte, N. C.; Philadelphia, Pa.

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Nitro, W. Va.; Parkersburg, Va.; Meadville, Pa.; Front Royal, Va.



*Reg. U. S. Pat. Off. © 1943, American Viscose Corp.

band which will have a constant relationship, insofar as its position in the skein goes, to the "significant" tieband used to identify the yarn, denier size and filament count. Thus, when facing the skein and with all tieband knots to the left, if the "key" tieband is above the "significant" tieband, then the skein will be right side out.

For the guidance and education of mill employees, American Viscose Corporation will place a sketch, similar to the one pictured here, in every case of skeined yarn shipped.

NEW RAYON BOOKLET IN DEMAND

Because it clearly emphasizes and illustrates the importance of rayon to the war effort, the new booklet, "Rayon Goes to War" is in great demand in the trade.

Recently issued by the American Vis-





Post-war fabrics will contain many new fibres from strange and unusual sources. Palco from the redwood forests of the Pacific Coast will be found in blankets, mackinaws and felts. Our Research and Engineering Staff have foreseen these many changes and are planning processes and equipment to convert these basic materials into beautiful and useful fabrics.

Now is the time to plan your "Saco-Lowell-izing Program" * to assure future profits and prosperity for your mill.

*SACO-LOWELL-IZE . . . 1. To utilize floor space so as to achieve the ideal in continuity of production. 2. To coordinate all successive steps in processing. 3. To reduce waste, spoilage and useless transportation of stock. 4. To attain the greatest economy in maintenance and operation costs.

SACO-LOWELL SHOPS 60 BATTERYMARCH ST., BOSTON, MASSACHUSETTS

Charlotte, N. C.
Greenville, S. C.
Atlanta, Ga.

THIS IS NO. 41 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation



(The first of a series of articles on tools used with Universal Winding Machines. Later articles will discuss tools for the No. 50, No. 60, No. 90 and the No. 250 Sizing Machine.)

SPECIAL TOOLS USED ON ROTO-CONER*

With each installation of Roto-Coners* the following tools are furnished:

Cone Holder Gauge	44-245-CAX
Builder Cam Lever Gauge	44-418-2CA
Slub Catcher Wrench	40-1084-4CA
MacColl Slub Catcher Clip	44-473
Spindle Bearing Adjusting Wrench	44-404
Cover Plate Clip R. H.	44-327
Cover Plate Clip L. H.	44-328
Tension Bail Safety Screw Wrench (Allen-Type)	WR-100
Telltale Safety Screw Wrench (Allen-Type)	WR-101
Stopping Lever Safety Screw Wrench (Allen-Type)	WR-102
Cam Safety Screw Wrench (Allen-Type)	WR-103
Traverse Shaft Coupling Safety Screw Wrench (Allen-Type)	WR-104
Coupling Cam Safety Screw Wrench (Allen-Type)	WR-106
Grease Gun (for Paper Coning only)	50-2725

Proper use of these tools will do much toward keeping the winding machine in perfect adjustment for quality work. Certain of them — such as the Safety Screw Wrenches — require no special explanation. The use of other tools, identified solely with the Roto-Coner*, is described below.

CONE HOLDER GAUGE

It is extremely important that the Cone Holder (or Tube Holder) be set in perfect relationship with the Rotary Traverse. The settings are made initially at our plant, and there should be no occasion for altering them, except when changing from one taper of package to another — such as from 9°36' paper coning to 5°57' wood coning or to paper tubing.

When making this change, the Cone Holder Gauge (44-245-CAX) is used, in order to obtain the correct setting. The upper plate of the gauge on which the tapers are marked is adjusted to the lower plate by means of the two screws to indicate the desired taper.

With the machine stopped, the Gauge is placed on the Rotary Traverse, as illustrated in Fig. 1, with the Locating Arm (A) resting securely on the frame. The Gauge is moved to the left until a lug which is on the under right-hand side of the Gauge touches the edge of the Rotary Traverse.

The left arm of the person doing the adjusting is used to depress the Starting Handle, which allows the Cone Holder to drop onto the Gauge. With the right hand, the Spindle Lock Pin Nut B (NU-304-CA) and the Spindle Holder Arm Spring Screw C (SC-1315) are loosened, permitting the

Cone Holder to be brought forward to press against the setting blade on the Gauge. The Nut (B) and Screw (C) are then tightened.

For paper coning, it is not necessary to have an empty cone on the Holder, but for paper tubing or wood coning, the bare container should be on the Holder when the adjustment is made.

The markings on the Gauge are clearly identified and it can be adjusted for the setting of 9°15' or 9°36' Paper Cones, 5°57' Wood Cones, or Tubes.

BUILDER CAM LEVER GAUGE

The Builder Motion is properly set before the winding machine leaves the factory, and no adjustment should be required unless a change is to be made in the taper of the winding package (or in the infrequent event of a broken part).

The re-setting is done with the Cone Holder raised to its highest position. On each Builder Stud Collar (A), Fig. 2, there are two screws (B shown, and another not shown) which, when loosened, permit the Collar to be adjusted so that the Builder Stud (C) will fit into the notch of the Gauge (D) when the latter is inserted in the bottom of the Cam Lever Slot. With the Collar held by hand against the Spindle Holder Bearing (E) and the Stud firm in the notch, the screws are retightened.

It will be noted there are two notches in the Gauge. The notch which is 1 1/16" from the remote end of the Gauge is always used for the standard setting. The other notch, which is 1 13/16" from the remote end, is used very infrequently on special yarns.

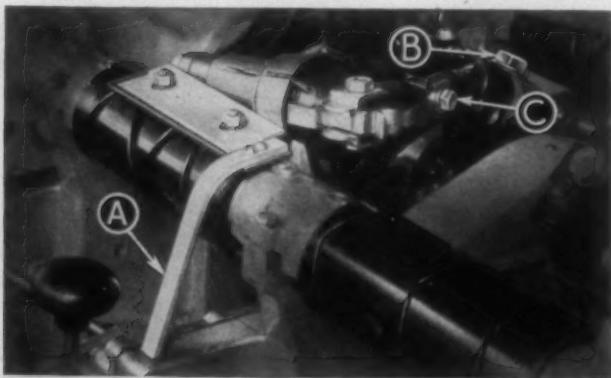


Fig. 1. Cone Holder Gauge 44-245-CAX

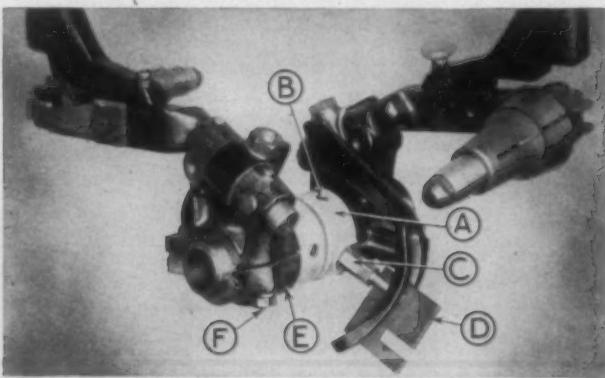


Fig. 2. Builder Cam Lever Gauge 44-418-2CA

See our Catalog in TEXTILE YEARBOOK
43-GMW-41

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY
PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U.S. Pat. Off. and Principal Foreign Countries.



HOW "HOLLOWING-OUT" DUG HIS OWN GRAVE

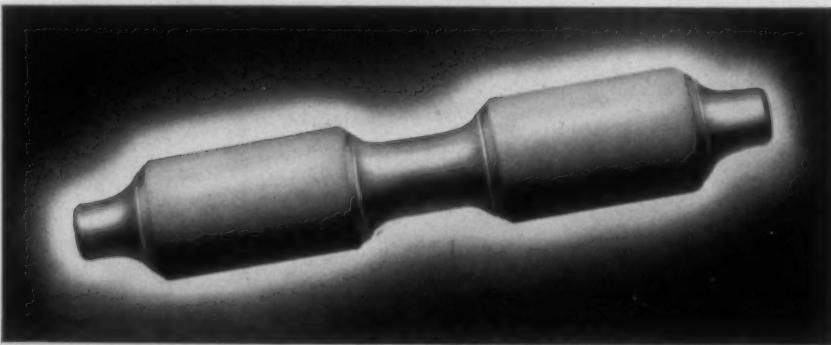
If this particularly obnoxious gremlin — one of the "Spinning Frame Gremlins" that delight in wrecking yarn quality and interfering with production — hadn't done such a thoroughly destructive job in this particular case, the boss spinner would have been philosophical about it. Instead, he got sore, and recommended that the roll coverings be changed to Spinna Calf.

And, of course, that meant the end of *Hollowing-Out*. For Lawrence's Spinna is triple-resilient — the leather fibres themselves are springy . . . the interlacing fibre structure will "give" and then return to original shape . . . and the air spaces in between compress and expand as the pressure comes on and off. So the cot holds its shape from end to end because it always springs back after the traversing of the sliver.

This triple-resiliency puts an end to trouble from *Hard-Ends*, too. And, the other Spinning Frame Gremlins give up for other reasons, when Spinna Calf ap-

pears. *Eyebrows* vanish, because Spinna's high frictional surface carries waste well back on the clearers. *Lapping-up* is all through because there are no rough or sticky places to "grab" the yarn. *Static* admits defeat because Spinna Calf is mineral-tanned, and the chrome content helps reduce static troubles.

Old Man Wear has a tougher fight with Spinna, too, for that tight-packed grain surface next to the yarn is extremely wear-resistant. For long life and a more positive, trouble-free drafting surface . . . have your roll coverer use Spinna, the calfskin he knows gives him more uniform quality.



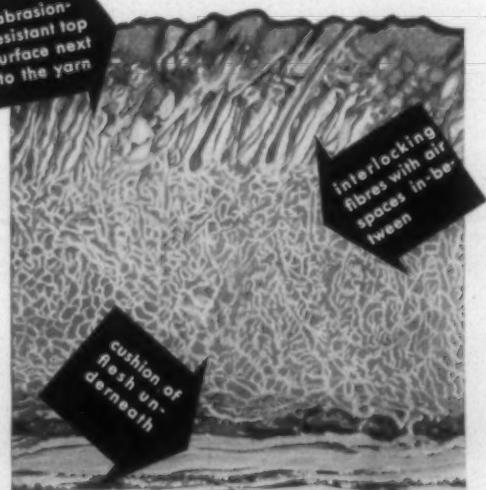
Lively **SPINNA CALF**
ROLL COVERING

It's Triple Resilient

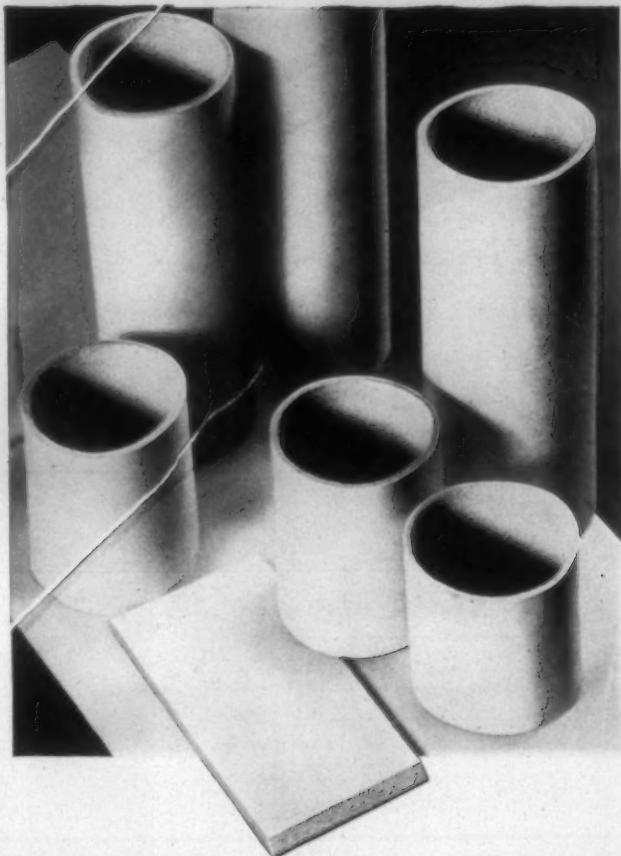


Spinna Calf..

AIR CUSHIONS IN A
NETWORK OF TOUGH,
SPRINGY FIBRES



"If you want roll covering that is adjustable to all counts . . . can take ordinary hard ends without leaving grooves . . . and stays kind to the yarn for up to 18 months and more in front line positions . . . then Spinna Calf — the most generally-used calfskin — is your best choice."



THE APRON THAT PROVED ITS RIGHT TO "NO. 1"

For many years, Lawrence Chrome Apron Leather has demonstrated superior drafting quality and greater economy over all other materials used for aprons on spinning and roving frames . . .

MORE EFFICIENT — Lawrence Chrome has a smooth, firm surface with a high co-efficient of friction — just right for holding and drawing the fibres. It resists abrasion for a long period of time. Furthermore, because of its mineral tannage, it is less susceptible to static.

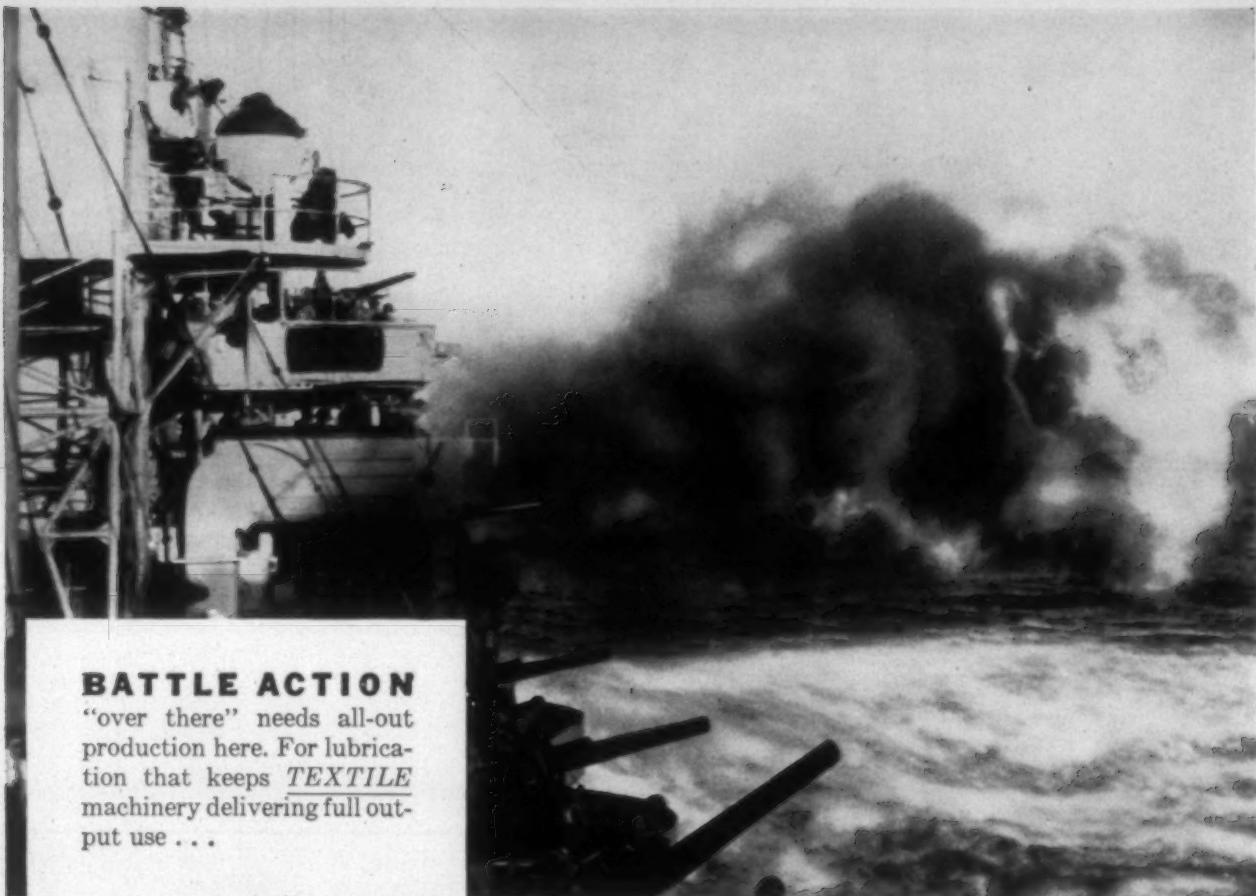
MORE DEPENDABLE — Lawrence Chrome aprons hold their shape longer because their tough network of springy fibres is not subject to permanent stretch, lengthwise or laterally. And the pores absorb oily and gummy deposits, leaving none on the surface to spoil the yarn.

MORE CONVENIENT — Aprons made from Lawrence Chrome are furnished open-end, permitting quick individual replacements—even in bottom positions—without costly delays.

No wonder more Lawrence Chrome is being used more for spinning and roving frames than any other brand. It is standard with Whitin Machine Works. Specify Lawrence Chrome Apron Leather the next time you order aprons.

LAWRENCE **CHROME** LEATHERS
1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY
PEABODY, MASS. GREENVILLE, S. C.



BATTLE ACTION

"over there" needs all-out production here. For lubrication that keeps *TEXTILE* machinery delivering full output use . . .



Official U. S. Navy Photograph

.....SINCLAIR LUBRICANTS...

Lily White Oils are non-gumming, non-sludging . . . give long-lasting spindle lubrication. No-Drip Lubricants are creep-proof and enduring on top rolls. Bearing Grease AF for plain bearings has the additional quality of being *neutral* in color and water soluble. Sinclair Knitting Machinery Oils meet highly specialized requirements.

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A Southern Cotton Manufacturer Looks At Renegotiation

NOT MANY, if any, managers of business or industry desire inordinate profits to result from the war. The larger part of profits now flow directly or indirectly from expenditures to save the nation's life, whether from government contracts or from other sources. Nearly everyone has given evidence of a willingness, a desire, to pay out of these profits whatever the Congress in its wisdom says is their fair share of the burden. Everyone is concerned in this respect, as you are concerned, mainly with the health of the organism that produces, not only for the sake of the present but also because of the terrific problems that lie ahead in post-war recovery. I speak for the cotton textile industry. What I shall say is applicable, I believe, in most respects to industry generally.

As I understand it, the objectives of renegotiation and the main reasons for its passage were to get fair prices on the government's purchases of war material and equipment. I mean that the government, through the Under Secretaries of the War and Navy Departments and through Mr. (Maurice) Karker and others, has represented always that renegotiation is primarily a part of the procurement process designed to get prices that are fair.

As we understand it, the renegotiation law grew out of two wartime necessities:

1. The necessity of obtaining rapidly many new articles as to which no previous cost experience was available. The new articles and the amounts in which they had to be produced frequently involved a complete conversion of the plant which was to produce them. The machinery had to be rearranged. Labor, which had no experience with the new article, had to be trained in new skills. In instances new materials about which neither the management nor labor had any knowledge had to be used. New plants had to be constructed, sometimes with private funds, often with

Excerpts from statement of Harvey W. Moore, executive vice-president of Brown Mfg. Co., Concord, N. C., before the ways and means committee of the U. S. House of Representatives, then considering Government renegotiation policies.

public funds. The armed services were not always certain of the design, and in the course of production many changes were made which altered the cost of the article.

2. The necessity of obtaining large quantities of other articles previously manufactured in such relatively small quantities as to make previous cost experience of little value under mass production. The most spectacular examples of this are the shipbuilding and aircraft industries. To meet the great demands it was necessary for these and other industries to change their methods of manufacture from custom building to a mass production basis. In making that change their previous experience was of no value in estimating cost.

For industries that fall into either one or both of these categories renegotiation served a vital pricing function.

Neither of these conditions prevail in old and established industries accustomed for many years to produce standardized goods on a mass-production basis. True, the profits of such industries may have increased or decreased, they do this even in so-called normal times. But their profit fluctuations were within comparatively narrow ranges. They were just such fluctuations, may I point out, as the excess-profits tax takes care of.

Not a New Industry

In some of the industries previously referred to it may be true that their increase in profits was so great that the excess-profits tax may have left them an unreasonable profit. But so far as I know, this is not true in any of the old established industries already organized on a mass-production basis that continued to make standard goods. Such an industry is the one I represent and which I shall describe.

The military fabrics that we produce are basically the same as the commercial fabrics which the industry has been manufacturing for many years. In fact, in many categories they are completely interchangeable. Where changes in construction are necessary they are only of a minor character and are of the type that our mills made regularly in the conduct of their operations in peacetime, and the costs of which they can predict with reasonable accuracy. Purchases of such fabrics were made in volume in peacetime; in fact many of them were developed co-operatively by the armed



Harvey Moore

services and the mills; and during peacetime the prices were arrived at by competitive bidding. I believe it is no exaggeration to say that the procurement officers of the services were probably better acquainted with textiles than with any other article in the procurement program.

Unlike other industries, as, for example, the rubber manufacturing industry, there have been no changes in the type of raw materials processed by our industry. American cotton is still the chief raw material and for many fabrics the largest single item of cost. The price of raw cotton is a matter of common knowledge, and can be and is known with precision.

The methods of processing raw cotton are the same today as they were in 1939, and as they were many years before 1939. The cotton-textile industry—the industry that ushered in the industrial revolution—is the oldest mass production in America. Its technology is the most mature of all industries.

Capacity Changed Little

There have been no important changes in technology in this industry comparable to those of many other industries, especially new war industries. Neither has there been any significant addition to the capacity of our industry, as in such industries as steel, aircraft, shipbuilding, aluminum, and magnesium. In 1942 only 210,000 new spindles were installed in this industry—less than one-half the number installed in 1940 and 1941. No new plants have been built and no government investment has been made in cotton mills for war purposes. The number of spindles in place at the beginning of 1943 is more than a million less than were in place in 1940. I would like to emphasize that.

Therefore, we believe that the war-time necessities that made renegotiation necessary for many industries were not present in the cotton-textile industry.

The effect, therefore, of the procurement program was merely to divert a substantial portion of the industry's products from civilian markets into the government market.

In addition to all this, in common with other old established industries producing standard goods, the cotton textile industry operated under price ceilings of the Office of Price Administration, imposed months before Pearl Harbor. I would not attempt a guess as to the number of man-hours that were spent by mill men in Washington and

by OPA and Tariff Board accountants in the field, in an attempt to reach a fair basis of OPA ceilings. From May of 1941 until the late fall of that year some group from the industry was almost constantly in Washington. Costs were checked. Historical profits were checked. After all this investigation the officials of OPA made their decision on prices.

The circumstances surrounding the determination of these ceilings and their adequacy for pricing textiles for war procurement deserve some consideration. In the cotton year ending July, 1939, the industry operated at 82.5 per cent of capacity, based on an 80-hour week; in the cotton year ending in July, 1940, operations increased to 94.2 per cent. By May, 1941, when the first ceiling was imposed, the industry operated at 121.7 per cent of capacity. In the course of the next 12 months, in which practically all our products were brought under ceiling prices, production reached its peak and has been declining ever since. Therefore, we can say that any economies resulting from volume operations were reached early in the war program, much earlier than in most industries, and are fully reflected in the ceiling imposed by the officials of OPA.

Further evidence of the closeness with which price ceilings were fixed is the fact that for at least two of our most important products going into military use, ceilings had to be increased to assure adequate production, and notwithstanding the fact that the combined demand for civilian and military requirements have been, and are, at the highest point in our history, production is steadily declining, and I repeat that the number of spindles in place has declined by 1,097,000 since 1940.

On Production—Who Is Right?

One reason given by Mr. Karker for including cotton manufacturing in renegotiation was, as I believe he stated to you, that production increased six or seven fold. Therefore costs went down tremendously; therefore excessive profits were made; therefore the need for renegotiation.

As a matter of fact, the volume of cotton manufacture did increase from 1939, the first year of the war, to 1942, the third year of the war, where peak production was attained. The increase in total yardage produced in this period was between 35 and 40 per cent—not 600 or 700 per cent. According to statistics of industry, production published by the Association of Cotton Textile Merchants, the total production in 1939 was 9,100,000,000 square yards, in 1940 was 9,600,000,000 square yards, in 1941 was 11,400,000,000 square yards, and in 1942 was 12,400,000,000 square yards. From 9,100,000,000 to 12,400,000,000 is an increase of 3,300,000,000—an increase of 36 per cent. Since the middle of 1942, however, production has decreased.

It is the position of the cotton-textile industry that statutory renegotiation should be repealed, or if it is continued in any respect, then the manufacture of standardized commercial articles should be exempted by law.

Well, then, you may ask, what should be done with respect to the recapture of excess profits. My answer is that the recapture of excess profits in our industry is adequately taken care of by the tax statute which you enacted in the fall of 1942, and which, I understand, you have in mind to give further consideration to when this question of renegotiation has been disposed of by you.

(Continued on Page 54)

Proposals For Revised Renegotiation Act Are Explained

Revisions of the renegotiation law as drafted by the House of Representatives ways and means subcommittee call for eliminating retroactive action and exemption from the law for standard commercial articles bought through competitive bidding, according to reports from Washington.

In an independent action, however, the House naval affairs committee has recommended extension of the renegotiation law to all Government purchases. Under the proposed extension, the task of administering the provisions will be the duty of the Treasury Department, except in farm contracts, which would be handled by the Department of Agriculture. It also proposes that accelerated depreciation, such as experienced by textile mills, be taken into account.

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Through 2 Years of Defense and War Programs our Loom Repair Service has been Kept at Peacetime Level
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DRAPER CORPORATION

42 Years... Thomas Nelson's Contribution To The Textile Industry

RETIREMENT of Dr. Thomas Nelson, dean of the nation's textile educators, as head of North Carolina State College's highly modern textile school has spotlighted his 42 years of service and leadership in producing thoroughly trained men and women for important tasks in the gigantic textile industry.

He joined the N. C. State faculty in 1901 with a vision that North Carolina could be developed into a great textile manufacturing center. He saw the unlimited opportunity for Southern colleges to train Southern boys and girls for leadership in the Southern textile industry. Following a continuously progressive policy, he brought his textile school to a foremost position said to be outranked by none other.

Today, his graduates hold responsible positions in mills in a dozen countries—vital participants in the gigantic task of providing clothes and other textile products for unnumbered millions of consumers, including the armed forces of several nations.

Widespread Influence

North Carolina, with its more than 600 textile plants, has been a fertile field for N. C. State graduates. There are as many as a dozen State College alumni holding managerial and executive positions in a single North Carolina textile plant. The graduates have spread throughout the South and East to put into practice the splendid training they received under Dr. Nelson. Students have come to him from many states and nations. He's known in textile circles from India to England and in the smallest North Carolina mill. The industry and the Federal Government have enlisted his services many times on special problems on which his expert advice was sought.

Fortunately for textile education and the industry as a whole, Dr. Nelson's retirement as dean does not mean he will leave the textile school. He has remained as professor of designing, with the title of dean emeritus. Thus, oncoming classes of youngsters will get the benefit of his encompassing knowledge of textiles and his forward-looking ideas.

N. C. State, in common with other Southern schools, had little to offer in the way of textile education when Dr. Nelson joined the faculty. The textile department, with a couple of machines, was tucked in a basement. It had only one other instructor and taught only carding and spinning.



Thomas Nelson

Today the textile school has a recently-built, four-story building with 75,000 square feet of floor space, equipped with the latest machinery. Dr. Nelson has endeavored to make it one of the best-equipped institutions in America for the manufacture of fancy rayon and cotton fabrics. It can turn out nearly every class of fabric made in this country.

Enrollment in the school before the war approximated 400, nearly tripling in a decade. Its graduating class was larger than the total enrollment 25 years before. Its resident enrollment led all textile schools in the nation. For several years, jobs have been secured for all members of the senior class before their graduation date.

A Native of England

Dr. Nelson was born in Preston, England, April 24, 1872. He attended the Preston Technical School and was awarded a certificate for weaving and designing in 1891 by the City and Guilds of London. He worked in some of the finest and fanciest mills in England. After coming to the United States, he worked in fancy mills in Connecticut and Massachusetts, and was assistant superintendent of a small mill in Petersburg, Va. He taught warp preparation and weaving in the Lowell (Mass.) Textile School for a year, and then came to N. C. State.

In 1906, he became professor of textiles and head of the textile department. In 1924, when the board of trustees created the textile school, Dr. Nelson became its first dean.



Learning spinning at N. C. State College

Two years later, the college conferred upon him the honorary degree of doctor of science in recognition of his 25 years of service with the college. He was elected first president of the newly-formed National Council of Textile School Deans last spring.

Dr. Nelson's successor as dean is Malcolm E. Campbell, an expert in textile research, native of New Bedford, Mass., and graduate of the Clemson College textile school. He has had experience in teaching at Clemson, and for 17 years

(Continued on Page 60)

Comparative Manufacturing Performance and Fiber Properties of Certain Long-Staple Cottons

COTTON FARMERS, marketing agencies and cotton manufacturers have frequently expressed the need for factual information regarding the relative qualities of S x P, an American-Egyptian variety, and Wilds 13, a long-staple American upland type cotton. There also has been considerable discussion between agricultural and trade groups concerning the relative quality of these and certain imported Egyptian, Anglo-Egyptian Sudan and Peruvian varieties. This study was undertaken for the purpose of furnishing reliable information that would be helpful in arriving at conclusions with respect to the comparative manufacturing value of these cottons. The results here reported should be of special interest at this time because of the wide use being made of long-staple cottons in the manufacture of war materials, such as airplane fabric, balloon cloth, parachute straps, sewing thread and other materials requiring both light weight and excellent strength.

Purpose of Study

Important points upon which there has been need for information regarding long-staple cottons are: (1) the comparative yarn strength and appearance; (2) comparative manufacturing waste; and (3) relative facility of processing.

The American growths of cotton included in this study were produced near Pecos, Tex., and Sacaton, Ariz., during the 1942 season. At Sacaton, the spinning lots were harvested from fields used to increase pure seed while the Pecos growths represent commercial plantings. Spinning lots of Egyptian, Sudan and Peruvian cottons were made up of samples from representative bales imported for use in specialty goods and were, therefore, considerably higher in quality than the average produced in those countries. Cottons comprising this test were roller ginned with the exception of Wilds 13, grown at Pecos, Tex., and Peruvian Tanquis which were saw ginned.

A new variety of American-Egyptian cotton, designated as SP x Sak 35, was included with the samples tested from Sacaton. This variety, though still in a developmental stage, has been increased sufficiently to permit a commercial mill test and appears to be an excellent cotton, but seed stocks will not be released until further tests are made and yield data obtained.

This report was prepared by the Food Distribution Administration of the cotton and fiber branch, United States Department of Agriculture. The spinning and fiber tests on which the report is based were made in the laboratories of the Food Distribution Administration at Clemson, S. C., in co-operation with the Clemson Agricultural College and the Bureau of Plant Industry, Soils and Agricultural Engineering.

Approximately two-thirds of the Egyptian and Anglo-Egyptian Sudan cotton consumed in the United States is of the Giza 7 variety. The other third consists largely of Sudan L (Lambert) and Sudan S (Sakel), Karnak, Sakha 4, Malaki and Maarad varieties.

Description of Tests

Each cotton was manufactured on standard commercial equipment in accordance with the laboratory methods used for processing small lots of long-staple cotton. A light picker treatment was used and the cottons were carded in accordance with the usual commercial practice for cottons of this length. Comber settings were the same for the SP x Sak 35, S x P and Peruvian Pima, but for the other cottons the setting of the cushion plate to detacher roll was decreased from 0.53-inch to 0.45-inch. Roving and spinning frames were of the regular draft type.

Warp yarns were spun with the optimum twist required to give maximum strength as measured by the skein method. Twists were determined by estimating the optimum twist and spinning and testing yarns made with two lesser and two greater twists. From these data the true optimum twist was determined for each cotton and the same twist multiplier was used in spinning the 60s, 80s and 100s yarns.

During each manufacturing process, notes were made in regard to the running qualities of the cottons, such as the appearance of the card and drawing webs, flyings and ends down at the spinning frame. The processing quality of each of the cottons was evaluated on the basis of these notes and general observations.

A portion of the yarns from two of the three counts spun was wound on blackboards and graded in accordance with standards for yarn appearance developed in the Department of Agriculture in co-operation with the American Society for Testing Materials.

Physical tests were made in the fiber laboratory to measure certain characteristics of the cottons. The usual techniques employed in the fiber testing laboratory were followed in making fiber tests on small representative samples of each cotton.

The Results

All cottons in this test were graded and stapled by the Appeal Board of Review Examiners, Washington, D. C. Grades were based on the standards for American-Egyptian cotton, with the exception of the Wilds 13 and Peruvian Tanquis which were graded in accordance with the stand-

ards for American upland cotton. Classification results in the accompany table show that the S x P cotton was somewhat longer than the Egyptian and Sudan cottons and about equal in length to the Peruvian Pima.

The average comber waste was higher for the Egyptian growths, the Sudan L and Peruvian Pima than for the S x P samples. Notwithstanding the lower comber waste removed from the S x P cottons, they were spun into stronger yarns on the average than the others in the test. The S x P and SP x Sak 35 cottons were spun into 60s yarn with an average skein break 14 per cent stronger than the average of those made from the Egyptian and Sudan growths. The S x P and SP x Sak 35 were found to be 16 per cent stronger than the Egyptian and Sudan cottons for 80s yarn and 18 per cent stronger for 100s yarns. Probably this was owing to the fact that the American-Egyptian growths were longer fibered. It should be added that previous tests on shorter stapled cotton have shown that within normal limits an increase of two per cent in comber waste removed from a given cotton will increase yarn skein strengths approximately one per cent. Therefore, had the amount of comber waste removed been increased for the S x P to a figure comparable to the average removed from the other cottons in the test, undoubtedly this variety would have shown even higher yarn strengths than those here reported.

Manufacturing waste removed by the pickers and card from the Wilds 13 variety was greater than that from S x P and most of the imported varieties. This higher waste reported for Wilds 13 in the accompanying table was, of course, not unusual as the grades were somewhat lower. The Peruvian Tanguis variety was quite free of foreign matter, having been graded good middling spotted and the picker and card waste was relatively low. Waste removed

FOR BETTER PERFORMANCE

Department of Agriculture research experts, in an effort to get maximum service from military fabrics and fiber products on all the various fighting fronts, have increased their determination to find improved treatments for mildew and rot as well as to provide better methods of testing commercially treated fabrics for rot resistance and mildewproofing.

The running of actual field tests in cold and tropic theaters, to find out how well textiles and fibers will stand up to the fungi causing rot and mildew, is prevented by a lack of time. But Agricultural Research Administration workers have figured out rapid methods of creating laboratory conditions similar to the actual fungi attacks that textiles must withstand in the far-flung fields of activity. Other tests have been set up to prove the effectiveness of currently used treatments against mildew and rot.

The information being developed, according to the Agricultural Research Administration, will answer such questions as: (1) Will any specific treatment protect adequately under certain severe conditions? (2) Will a given treatment interfere with other treatments, such as waterproofing or fireproofing? (3) Does the rot-protection and mildew-proofing have a bad effect on the textile, such as stiffening, shrinking, bad color, or bad odor? and (4) Does its use present any special difficulties?

at these processes was much less for Tanguis than for the No. 1 grade Giza 7 sample, the two shorter-fibered cottons tested.

Peruvian Pima was manufactured into yarns having higher skein breaks than the average for the Egyptian varieties. The shorter and coarse fibered Tanguis variety, however, made considerably weaker yarns than any of the other cottons in the test.

A comparison of the two domestic growths showed that the S x P variety gave a 20 per cent higher skein break than the shorter Wilds 13 variety when spun into 60s yarns. This difference in yarn strength, based on averages of the three S x P cottons and two Wilds 13 cottons tested, is too great to permit a satisfactory substitution of Wilds for S x P in goods requiring excellent strength.

Comparing the skein strength of Wilds 13 with that for the widely used Giza 7, it was found that in one instance Wilds 13 is better and in the other Giza 7 is superior. Giza 7 made stronger yarns than the average of the two Wilds cottons in the coarser counts, but in the finest count the longer-fibered Wilds was superior. Had the amount of comber waste removed from the Wilds 13 grown at Pecos been increased to equal that removed from Giza 7, even this Wilds sample probably would have made yarns about equal in strength to the Giza 7.

Yarn Appearance

Yarn appearance is also a very important factor to be considered in the manufacture of fine goods. It is, therefore, worth while to consider the more important factors that go to make up yarn appearance. Neps are particularly undesirable in yarns that go into balloon cloth and sewing thread. They show up readily in the yarns, particularly in the finer counts, but when yarns are plied, neps are somewhat less noticeable. To compare the cottons for neppiness, portions of the card web were removed intermittently during the carding process and the neps counted. Other factors of perhaps less importance in determining yarn appearance grades are foreign matter, evenness and freedom from excessive fuzz fibers. Appearance grades were determined in accordance with the yarn appearance standards. In general, it was found that the better appearing yarns were made from those cottons having the fewer neps in the card web.

The mature fibered Giza 7 variety had the fewest neps and highest yarn appearance grades in the test. The S x P variety compared favorably in yarn appearance with the Sudan and Peruvian cottons and with all except Giza 7 of the Egyptian cottons. The SP x Sak 35 sample was somewhat neppy but made yarns of satisfactory appearance. This variety is suitable for use in very fine counts as shown by the skein strengths which are definitely superior to all other samples in the test. Only Giza 7 and one of the S x P samples made 100s yarns of better appearance than SP x Sak 35. Peruvian Pima was the poorest sample tested from the standpoint of card web neppiness and yarn appearance.

Wilds 13 was relatively free of neps and made 60s yarn having good appearance but the 100s from this variety graded C+, which is slightly rough. Large quantities of these long staple cottons are used for making yarns ranging around 60s. The Wilds 13 variety could satisfactorily be substituted for some of the imported growths. But, because of the rather rough appearance of the 100s yarn spun from Wilds and its lower yarn strengths, this cotton could not be

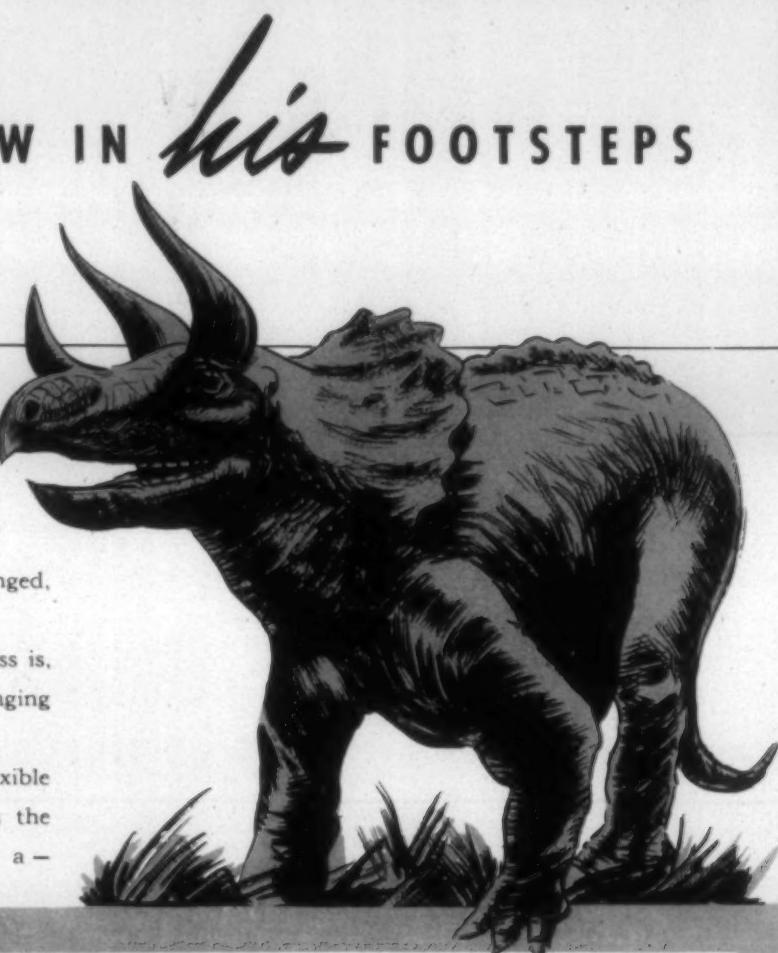
(Continued on Page 50)

DON'T FOLLOW IN *his* FOOTSTEPS

The grotesque triceratops, one of the largest and strongest of the dinosaur species, flourished for centuries in prehistoric times in his native tropical Wyoming. Yet when the climate changed, he could not survive.

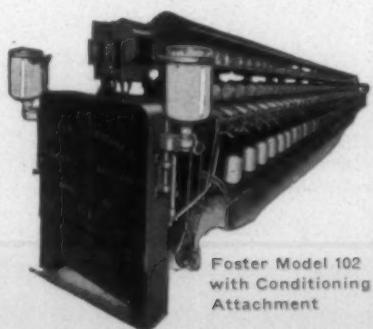
No matter how strong your business is, it too can become a victim of changing conditions, if not kept adaptable.

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PRACTICAL TEXTILE DESIGNING

By THOMAS NELSON, Dean Emeritus of the Textile School,
North Carolina State College, Raleigh

PART TWENTY

This is another in a series of articles on designing by Thomas Nelson, a recognized authority on the subject. His topic in this issue is extra filling figuring, and in the Nov. 1 issue he will deal with filling backed fabrics.

THE extra filling figuring system of making fabrics is extensively used in the cotton goods trade. The object aimed at is to produce spots and figures of all descriptions arranged in different orders or systems on a regular plain fabric. This method of figuring is also used extensively on marquisette curtain goods. These fabrics are always made on a drop box loom, as the filling for spot and figure is generally coarser or heavier than the filling for the body of cloth and is also soft twisted. The designs and chain plans for these fabrics are always made for the fabric to be woven wrong side up in the loom. In other words, the figure or spot will be on the under side of fabric when being woven with the loose or floating filling on the top of fabric in loom. The reason for weaving these fabrics with the wrong side on top is to save a heavy lift of the harness shafts, for it will be seen that when the extra filling is being inserted only the harness shafts for the figure is required to be

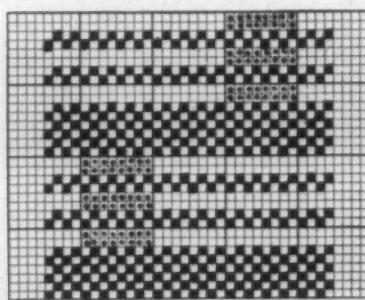
fabric. It will be seen how the filling floats on the face of the fabric and under the fabric for the spot.

After the fabric is woven, the extra filling which floats between the spots is cut off. This brings up another point. It will be seen that after the extra filling has been cut off between the spots, the filling in the spots is held in position only by the compression of the picks in the fabric. Consequently the extra filling is unable to resist friction and easily pulls out. One method of overcoming this objectionable feature is to bind the extra filling on both sides of the spot, as illustrated at Fig. 279.

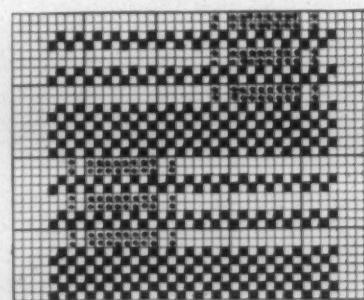
Another method of preventing the extra filling from pulling out of the spots easily is to interweave the filling with the threads as illustrated at Fig. 280. The spots show up very clearly because the extra filling is much coarser than the other yarns used in the fabric.

The extra filling used for spots and figures does not assist in any way in forming the fabric proper. The spots and figures are intended to ornament the fabric.

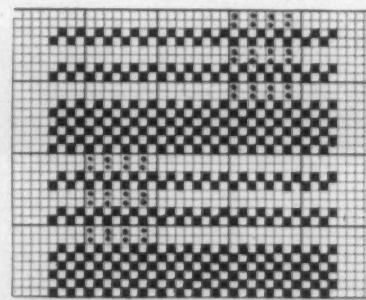
In order to prevent a thin place being made in the fabric when the two extra picks are being inserted, the take up motion will have to be stopped. This is accomplished by raising the catch on take up gears. The catch is connected



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raised. On the other hand, if the fabric is woven face up, all the harness shafts except those used for the figure would be raised and this would be a heavy lift.

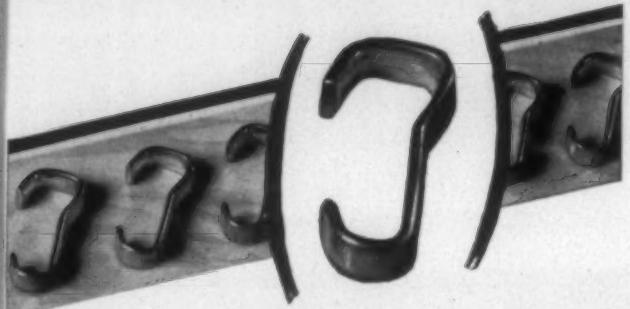
On fine goods, however, the extra filling on the top of the fabric is a source of annoyance to the weaver, and if the weaver is in any way careless many floats are passed that ought to be picked out. These floats are often caused by a thread breaking and becoming tangled with other threads behind the reed, thereby preventing them from opening to form the shed and causing them to float together; hence the term float. The loose filling on the top of the fabric prevents the weaver from seeing these floats unless he or she is attending strictly to business.

Fig. 278 is a design for a small spot on a plain weave

to a harness lever in the dobby and when the extra picks are being inserted, this lever is raised, thus raising the catch on the take up gear and the fabric is not drawn down on these picks.

The extra filling can be bound at the sides of the fabric either by the selvages or by a catch cord. When bound by selvages, two harness shafts which carry only the selavage heddles are used, and these two shafts weave plain continuously through the fabric. If binding the extra filling in this manner causes the selvages to become tight during weaving, a catch cord can be used. This cord is simply a few threads, or a ply yarn, drawn through a heddle on each side of the selavage threads and then through the reed with

(Continued on Page 48)



You Can't Fool the Experts

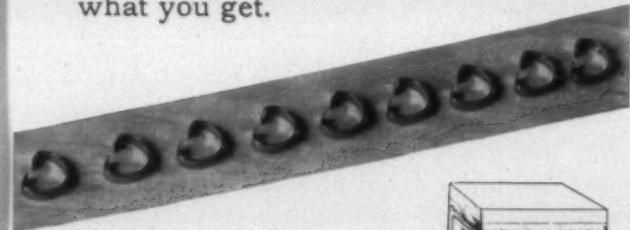
Travelers that are not checked, tested, weighed, measured, and inspected—traveler by traveler—during each step of their manufacture, and again before each carton is packed—just don't get checked.

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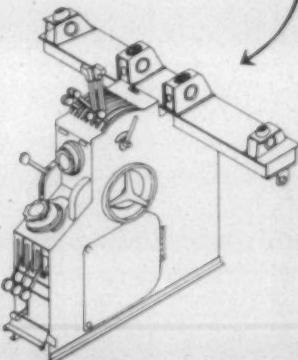
The Bahnson Company has taken its place in the war effort by manufacturing material for the Air Corps and Army Ordnance.

Air-Conditioning Equipment is still available on priority ratings and Bahnson service men are available for any air-conditioning troubles.

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The Bahnson skill, engineering ability, organization, and precision manufacturing methods applied to solving air-conditioning problems have been largely devoted to the manufacture of war materials, such as this control pedestal—nerve center of the above Army plane.



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MILL NEWS

RICHMOND, VA.—Fiberglas, Inc., has been granted a certificate of authority by the Virginia Corporation Commission to manufacture fibers composed of glass, under maximum capital of \$25,000.

CENTRAL, S. C.—Cannon Mills Co. has acquired 100 per cent of the common stock of Central Mills, and has sold the Cannon Plant No. 3 at York, S. C., to Central Mills, according to notification sent to the Securities and Exchange Commission. The price was the book value of the Cannon plant on the date of sale.

ENKA, N. C.—Construction contracts necessary to complete a five million dollar expansion program have been let by American Enka Corp. and work has already begun. The company is carrying out an extensive advertising program to secure workers for the many jobs which will be available upon completion of the project.

ROCK HILL, S. C.—A salute to the company's 858 employees now in the armed services has been published in booklet form by Rock Hill Printing & Finishing Co. The booklet, entitled, "Industry Goes to War," is attractively illustrated with flags and pictures of employees now in uniform along with messages from them. Other illustrations show the plant in operation, its products and their uses by the services.

ELIZABETHTON, TENN.—The Tennessee State Equalization Board has removed a \$1,500,000 increase in city tax assessments against the local plants of American Bemberg Corp. and North American Rayon Corp. The decision sustained the plants in an appeal that their 1941 assessments be retained. A state act last year extended Elizabethton city limits to include the plants, which are now facing municipal taxes for the first time.

TWO MORE "E" AWARDS

Sonoco Products Co. has received notice that its Hartsville, S. C., plant will be formally presented the Army-Navy "E" award Nov. 4. The Hartsville plant, which is the company's main unit as well as general office, has been actively producing a variety of special products for both the Army and Navy, and acts as subcontractor on other war products. It is estimated that 90 per cent of the total production in all Sonoco factories is either directly or indirectly concerned with the war effort.

The 62nd Southern textile plant to receive the coveted production pennant will be Columbia (S. C.) Mills Co., an affiliate of Mt. Vernon Woodberry Mills. The award will be presented Oct. 27.

LINCOLNTON, N. C.—The left wing of Balston Yarn Mills, Inc., collapsed Oct. 10 while the plant was not operating, damaging 19 spinning and winding machines. Superintendent R. F. Gardner has stated that damage to machinery and property will run between \$50,000 and \$75,000. No one was in the mill at the time except the nightwatchman, Adolphus Carpenter, who was uninjured when the building collapsed. Male employees of the plant are helping with reconstruction, and repairs are expected to be completed within a month. The old mill was constructed in 1900 by the Abernathy family, and was known as the "Wampum" Mill. W. L. Balthis of Balthis of Gastonia, N. C., is president of the firm.

ABBEVILLE, S. C.—Abbeville Mills, predecessor to Abbeville Mills Corp., is further along the way to being liquidated following the recent decision to pay \$13 a share to all stockholders upon surrender of stock. Sale of the original organization was made some time ago to Abbeville Mills Corp. for \$250,000.

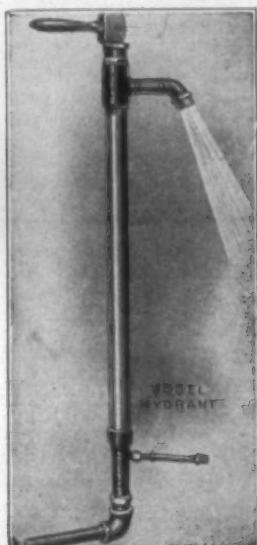
ROCKY MOUNT, N. C.—In commemoration of its 125th anniversary, Rocky Mount Mills has distributed an attractive 52-page history of the organization. The story is a historical record of a single manufacturing establishment that has successfully operated for more than a century under the management of one family. It presents a case history of a company that epitomizes, in its origin and subsequent development, the establishment and growth of American industry as a whole during the period of transition of the United States from a vast unexploited storehouse of natural resources to the highly organized society it is today. It tells the story of the Battle family and its long connection with the company, how the mill had its beginning, the Civil War era, the South after reconstruction and Rocky Mount Mills today. A long list of peacetime and wartime uses of the plant's production of carded yarns is followed by a simplified explanation of the various processes connected with the spinning of cotton.

LENOIR, N. C.—The weekly night shift payroll was stolen recently from Steele Cotton Mill Co. by bold thieves who entered the mill offices while the plant was in operation. Agents of the State Bureau of Investigation were called in to clear up the matter.

SPARTANBURG, S. C.—The new testing laboratory of Beaumont Mfg. Co. is now in full operation, assisting the plant to continue the production record which won the Army-Navy "E" as well as a star for the pennant. The testing program at present is connected with the carding, spinning, winding and weaving departments, with a full complement of equipment on hand to handle this work. The research and control laboratories are under the supervision of Dr. H. E. Shiver, assisted by Fred Neal, Jr., Wilmet Mitchell, Miss Mary Weeks and Mrs. W. B. Austin.

To help win the battle of PRODUCTION

WAR PLANTS SPECIFY VOGEL FROST-PROOF HYDRANTS



Conservation of life and property is as essential to the war effort as a war plant's finished product. Vogel Frost-Proof Hydrants are being specified to safeguard the lives of thousands of workers in chemical plants, powder mills, ordnance works and other industries where large and immediate water flow must be constantly available to combat chemical burns and similar emergencies. All types of war plants, including shipyards, etc. are using these hydrants to minimize the hazards of fire.

And, of course, thousands of farmers safeguard their stock and equipment with Vogel Frost-Proof Hydrants because they especially appreciate the value of a hydrant which does not freeze-up, even at lowest temperatures.

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Fewer Ends Down. Not as many stops or piecings. Not as many adjustments. Cleaner and very much more comfortable rooms.

Better Product from shorter, less expensive staple. And very often 2% to 3% more production.

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PERSONAL NEWS

S. L. Deane is now general superintendent of San Antonio Cotton Mills at Southton, Tex.

George W. Blackburn is now superintendent of Dallas (Tex.) Cotton Mills.

Norman G. Glattfelter, formerly superintendent of Elberton (Ga.) Cotton Mills, is now general manager of Brooks Bros. Mills and Southern Pile Fabric Co.

R. W. Hollis, who has been connected with Alabama Mills, Inc., for 15 years and recently as superintendent of the company's Jasper plant, has accepted a position at Algodon Mfg. Co., Bessemer City, N. C.

R. F. Mills, formerly overseer of spinning at Samoset Cotton Mills, Talladega, Ala., is now overseer of carding and spinning at Saratoga Victory Mills, Inc., Guntersville, Ala.

James H. Ellis, formerly second hand of spinning, spooling and warping at Gossett Mills, Williamston, S. C., is now overseer of spinning, spooling and warping at Martinsville (Va.) Cotton Mill Co.

John Bonino, formerly of Caede Dyeing Co., Paterson, N. J., is now a textile finishing technician for Atlantic Chemical Co., Centerdale, R. I.

Richard P. Brown, chairman of the board of Brown Instrument Co., Philadelphia, Pa., has been named deputy director of the War Production Board's third region.

Alex Haynes, who for the past 15 years has represented Ferguson Gear Co. of Gastonia, N. C., is now a technical engineer for Carter Traveler Co., Gastonia, and will cover eastern North Carolina and Virginia.

Edwin D. Fowle, publisher of *Textile World*, has become editor of the publication in addition to his other duties. He succeeds Douglas G. Woolf.

Dr. Lester S. Sinness, for eight years engaged in research activities in the technical division of Du Pont's rayon department, has been named director of viscose rayon research. He was at one time research manager at the company's Richmond, Va., plant. Dr. Edward F. West has become Dr. Sinness' assistant, and will be stationed at Richmond.

Roland Walsh, commanding officer of the Philadelphia (Pa.) Quartermaster Depot, is now a brigadier general, his appointment having been confirmed by the U. S. Senate.

Charles S. Hennery was re-elected president of Santee Mills, Orangeburg, S. C., at a recent meeting of officials. Also re-elected were F. F. H. Fleitmann of New York City, vice-president; Frank E. Whitman of New York, treasurer; H. C. Neumann, New York, assistant treasurer; and James M. Green of Orangeburg, secretary.

William H. Scott, for the past five years vice-president of Aqua-Sec Corp., has been elected president of the company.

J. F. Schenck, Sr., president of Cleveland Mill & Power Co., Lawndale, N. C., has been elected an honorary member of the Shelby (N. C.) Rotary Club. This month is the 70th anniversary of the founding of the company.

J. Y. Jones, superintendent of Newberry (S. C.) Cotton Mills, has been placed in charge of his community's war fund drive.

Maj.-Gen. Edmund B. Gregory, quartermaster general of Army Service Forces, and two textile executives, B. B. Gossett of Charlotte, N. C., and Leavelle McCampbell of New York City, received honorary doctor of laws degrees Oct. 15 at Presbyterian College, Clinton, S. C. Dr. William P. Jacobs, executive vice-president of the Cotton Manufacturers Association of South Carolina, is president of the college.

Earle R. Stall, president, F. W. Symmes, vice-president, and C. L. Steadman, secretary, were re-elected at the annual meeting of F. W. Poe Mfg. Co. Oct. 12 at Greenville, S. C. Directors of the company were also re-elected.

John Pickup, overseer of the bleachery at the Fieldale, Va., plant of Marshall Field & Co., now has four sons in the armed forces.

Roland L. Lee is now cotton technologist and dean of educational activities at Callaway Institute, Inc., LaGrange, Ga., following his resignation from the Southern Regional Research Laboratory at New Orleans, La. Previously he had been engaged in cotton testing work for the U. S. Department of Agriculture, and was at one time an instructor in the textile school at Clemson College, S. C.

Major Norman A. Cocke, Jr., formerly of the Charlotte, N. C., office of American Viscose Corp., was married recently to Miss Barbara Muhs Smith of Ridgewood, N. J. Major Cocke recently returned from overseas duty.

Captain Warren R. Williams, Jr., son of the president of Father George Mills, Sanford, N. C., was with the first troops landed on Sicily.

Carl W. Von Drelee, formerly associated with the manufacturing division of Marshall Field & Co. at Spray, N. C., and Pawtucket, R. I., has become comptroller and assistant secretary-treasurer of North Star Woolen Mill Co., Minneapolis, Minn.

J. L. Beard has become superintendent of the Cliffside Mills plant at Avondale, N. C., succeeding H. C. Rollins, who has accepted a position with Carter Fabrics, Inc., Greensboro, N. C. H. M. Owens is now secretary of Cliffside Mills.

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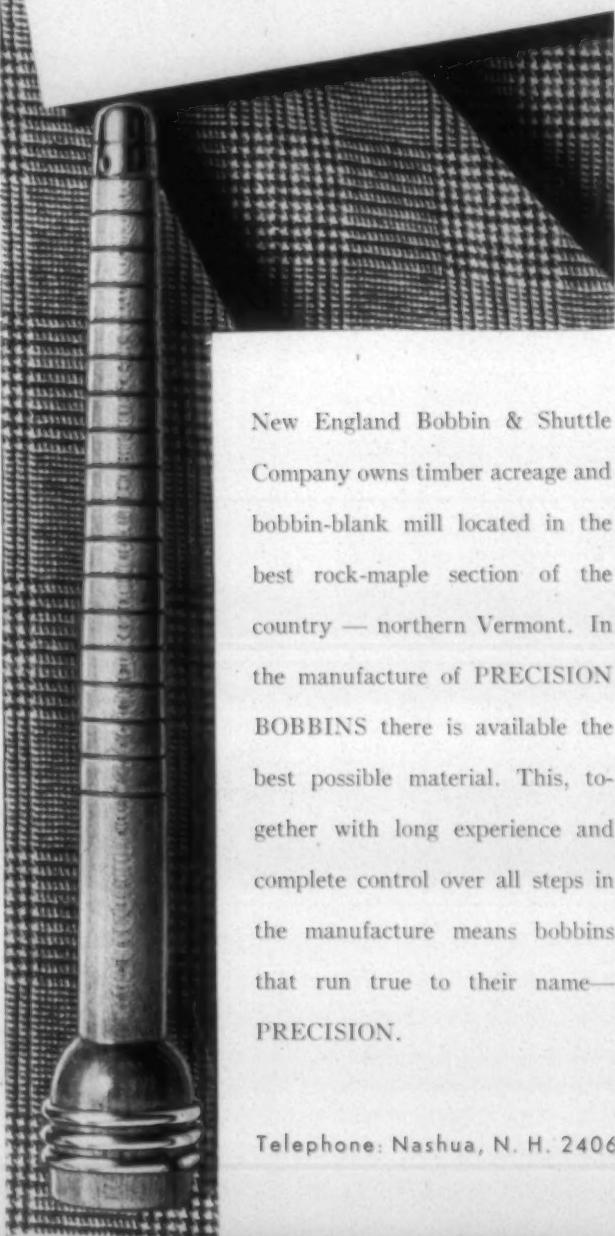
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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Post-War Glimpses

A recent visit of the editor to many of the manufacturers of textile machinery and textile supplies has convinced us that those textile manufacturers who anticipate radical changes in machinery and equipment are headed for disappointment.

The manufacturers of textile machinery and supplies have been far too busy with war orders to devote much time to remodeling their textile machinery and very few expect many improvements to be developed until three or four years after hostilities have ceased.

There is the feeling that rayon and other synthetic fibers will encroach upon the use of cotton and that many mills which now spin cotton will soon after the war become spinners of cut fibers. A good deal of evidence backs this feeling; look at the many mills which have already switched to the processing of synthetic fibers.

The editor of this publication was named for a grandfather who was the largest planter in North Carolina, and all of his life he has been close to cotton. He was taught to look upon it as "King."

We have seen cotton sell for long periods at four and one-half, five and six cents per pound and we have also seen it sell during the boom period of World War I at 42 cents per pound.

We know that some men operating large farms or plantations with low-price farm labor have made money some years, but we are far from certain that cotton has been a blessing to the South.

We do know the poverty and the distressful living

conditions which existed upon the farm during the years of five and six-cent cotton.

It was in those years that the late D. A. Tompkins of Charlotte, to whom the textile industry owes a debt which it has never paid or even recognized, traveled the South from North Carolina to Texas preaching the doctrine that the only salvation for our section was to build cotton mills and sell our cotton in the form of 25-cent per pound cotton goods rather than for five cents per pound in the bales.

In recent years our farmers have received better prices and so progressed that they can now raise as many bales on 23,000,000 acres as they formerly raised on 32,000,000, but visits to the farms of those who have stuck to cotton as their major crop will not disclose any evidence of the standard of living to which farmers of this day are entitled.

It may prove to be a good thing for the farmers to change to other crops and raise only 5,000,000 to 6,000,000 bales of cotton, and we rather expect to see such a situation develop.

No matter how great may be the interest and affection of the textile manufacturers of the South for cotton, they are primarily *textile* manufacturers. It should not make a great deal of difference to them whether or not the material passing through their cards and spinning frames and looms was picked from a bush grown in their section, or was produced by the chemical treatment of wood which grew in the nearby forests or from the short fibers which were left when the lint cotton was removed from the seed to which it adhered.

No matter whether we like it or not, there is a reasonable certainty that in the post-war years the warps upon many looms will be changed from cotton to rayon, nylon and other synthetic yarns, and many spindles now spinning cotton will be handling cut fibers of many kinds.

The real handicap to the increase in the spinning of cut synthetic fibers is not a love for cotton but difficulties in the finishing and converting of the woven goods. Many "bugs" remain in the finishing of spun rayon goods but much research is being done. We have heard discussions of machines to dry both warps and goods with infra-red rays. Already a number of mills have installed infra-red drying units. Because infra-red rays, which are very good when allowed to have a direct effect, are not so good upon the portions of a yarn or goods left in the shadow, electronics have been called upon. We hear that there is in the experimental stage a warp drying machine which uses short wave electronics.

We may be giving a rather amateurish and possibly partly erroneous description of these applications to warp and cloth drying, but we do know that developments are being made along such lines and that much research is being done.

The development of sanforization has brought about a general demand for goods which will not

shrink and in which the cross threads will hold a fixed position, and the public is, in many cases, demanding spun rayon goods which have similar qualities.

As spun rayons cannot be easily handled on sanforizing machines, many experiments are being made in the shrinking of such goods by chemicals and some developments may be expected.

The millions in our armed forces have become accustomed to well and closely woven fabrics and, because the Army and Navy have insisted upon vat dyes, have become accustomed to coats, underwear and even socks which will hold their color under all conditions.

We believe that upon that experience they will demand good fabrics and fast colors in civilian life.

The men in our fighting forces have also become accustomed to well-fitting clothes, and will never again be willing to wear ill-fitting garments which they formerly bought at county stores or in many of the small city shops.

Necessity is the mother of invention, and the post-war demand for certain types of goods will set in motion the minds of those interested in machines and methods which will produce goods to meet the demands.

It is not well to expect many immediate post-war changes in textile machinery and equipment, or textile fabrics, but there are certain trends which can be expected to ultimately result in new machines and new processes.

Government Goods Come Peace

Textile manufacturers know that the Government holds many million yards of 8.2 Army twill and other fabrics and many million yards of nylon goods woven for parachutes.

It is not for us to say when the war will end, but it may end earlier than expected and it may end suddenly. Whenever it ends these millions of yards of goods will be on hand and most of them will not be needed.

Not only will the mills which have been making such goods find that their principal customer is no longer a purchaser, but history may repeat itself and the Government may become a seller, as after World War I, and offer the goods on hand to the public. The prices may be sacrifice prices.

After World War I, the Government made a pretense of holding the goods it had purchased, but whenever the market for any of such goods became firm and able to absorb the output being manufactured the Government fed a certain amount to the market.

The converters and other consumers learned that there was no reason to become alarmed over an ad-

vance in prices because it would soon be checked by the sale of goods held by the Government.

It was difficult and almost impossible to establish a profitable market under such circumstances. One cotton manufacturer has expressed the opinion that had the cotton textile industry purchased from the Government all the surplus cotton goods on hand at the end of World War I and dumped them in the Atlantic ocean, the industry would have been better off at the end of ten years.

In spite of the experiences of the cotton textile industry with Government goods after the last war, we have not heard of any organized effort to prevent a repetition of such experiences.

Those experienced in the export of cotton goods know that it is difficult to sell goods in foreign countries unless they have been converted and adapted to the styles and colors to which the peoples of those countries have been accustomed.

The 8.2 Army twill is a splendid fabric and would probably make far better garments for the people of some countries than the goods they usually obtain, but if shipped to them in the gray or in our Army colors would probably not be accepted.

If, however, the styles and the colors of the people of foreign countries are studied, and the 8.2 twill is printed or dyed to suit their tastes, it is probable that large quantities can be shipped overseas and be removed from possible competition in our local markets.

For instance, it is well known that the Chinese use very few goods unless dyed certain shades of blue and it is possible that 8.2 twill dyed blue could be sold in immense quantities in China.

Such goods would have to be sold at below cost prices but the Government would probably be willing to make the sacrifice. Franklin D. Roosevelt and Henry Wallace would probably favor giving them away.

It seems to us that the Cotton-Textile Institute could render a real service if it would make a study of foreign styles and tastes and work out plans for the conversion of 8.2 twill and other Army goods, to the end that conversion could begin promptly after the end of the war rather than flounder around for many months while trying to find how Government goods can be converted and where they can be sold.

The Government has about \$10,000,000,000 in Army-Navy plants, and when the war ends Government officials are going to be so concerned with what shall be done with those plants that they will not be willing to devote much time to the problem of a few million dollars invested in textile goods.

Now is the time to locate possible post-war markets for Government-held textiles and to work out methods of converting goods which these markets can absorb as soon as peace comes.



Army Supplies Float in Textile Bags

How to carry clothing and dehydrated foods through jungle streams was a problem for the Army—but not for long.

Waterproof bags designed by the Quartermaster Corps protect supplies in the most humid climate. Compact and light in weight, easy to carry, yet give complete protection when thoroughly wet during the fording of a stream.

There is one bag for clothes . . . another for foods. Both are made of a tough, weatherproof sheeting fabric. A flat-braided cotton tie cord is used to close the bag.

Mills making fabrics for the new waterproof bags depend on Butter-

worth Machines at every step in the Wet End of Textile Finishing.

Butterworth Machines are playing their part in the battle of production—bleaching, boiling-out, drying, calendering, dyeing.

Butterworth engineers freely offer their cooperation to mills seeking to achieve increased productive efficiency . . . or to repair or replace worn-out or obsolete equipment.

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DYEING AND FINISHING

Notes on Naphthol Dyeing

By GEORGE BROUN

Part Two

IN the initial article of this series, the writer outlined a list of factors that related directly to the control and the preparation of naphthols and the naphtholation bath, as well as the preparation of base solutions and the coupling (developing) bath. This article will discuss the chief factors that have been used advantageously in the dyeing of naphthols in package and raw stock dyeing machines.

Preparation of Naphthols for Naphtholation Bath

The substantive naphthols are the ones that give the most uniform and satisfactory results on package and raw stock dyeing, though there are some naphthols rated as non-substantive that can be used with moderately satisfactory results.

The substantive naphthols used for package and raw stock machine dyeing are Naphthol ASSW, Naphthol ASTR, Naphthol ASBG, Naphthol ASBR, Naphthol ASSG and Naphthol ASSR.

The lesser substantive naphthols, used with varying degrees of success, are Naphthol ASG and Naphthol ASBS.

The first method used for dissolving naphthol was the hot method. This procedure required pasting up of the naphthol with some type of highly sulfonated castor oil, fatty alcohol or alkali resistant wetting out agent, then the required amount of caustic soda with boiling water, usually boiling the naphthol to obtain a clear solution. This procedure required a longer ratio of liquor for dissolving a given amount of naphthol, as well as a considerably larger amount of caustic soda.

An Improved Method

A later and much improved dissolving method was worked out and this was known as the naphthol cold dissolving method. The cold dissolving method used ethyl or methyl alcohol for the pasting up of the naphthol cold, then adding the desired amount of cold water in which has been dissolved the caustic soda required. A thorough stirring will usually give a clear solution; if not, a slight addition of caustic soda or alcohol will usually clear up the solution.

In some cases, it is necessary to heat the solution to 160-180° F. for five minutes, or longer, to obtain solution. If this is done be certain that additional alcohol is added so as to help clear the solution up properly.

The cold dissolving method is based on the highly dispersing action of ethyl or methyl alcohol on the various

naphthols, thus dispersing the naphthol into fine particles, through pasting, whereby the caustic soda addition then actually dissolves the naphthol through the formation of a sodium alcoholate-naphtholate solution.

Some naphthol dyers have found it more economical to use less alcohol by mixing their alcohol with ten per cent or more of highly sulfonated castor and then pasting up the naphthol and dissolving cold with diluted cold caustic soda solution as outlined. Sulfonated castor is the cheapest product that will give good results when mixed with alcohol for dissolving naphthol by the cold process and has been widely used during this wartime period to help make the available alcohol be sufficient for a plant's naphthol dyeing requirements.

To Retain Solution

To prevent the prepared naphthol solution from going out of solution when diluting it, upon entering into the expansion tank of dyeing machine, this tank is usually charged or sprung with several pounds of caustic soda, which enables the naphtholate solution to remain stable and clear and in solution ready for dyeing operation when prepared correctly.

For the naphthols listed, the following amounts of caustic soda are recommended by the makers for use on the hot or cold dissolving methods. These amounts are based on the preparation of one pound of naphthol as listed.

	<i>Hot Dissolving</i> Per Pound of Naphthol Caustic Soda (Dry) Lb.	<i>Cold Dissolving</i> Caustic Soda (Dry) Lb.
ASSW	1.0	0.25
ASTR	0.5	0.25
ASBG	1.25	0.25
ASSG	0.50	0.15
ASSR	0.50	0.15
ASBR	1.25	0.30
ASG	1.25	0.40
ASBS	0.75	0.30

In plant practice, the usual rule is to increase the amount of caustic soda as recommended for the hot dissolving method if it is possible to use less caustic soda than recommended for cold dissolving method. By using the least amount of caustic soda possible to obtain a clear solution by the cold method, the dyer is permitted to then add to

the expansion tank one to two times as much caustic soda as naphthal used, thus helping to insure sufficient alkali to hold the naphthal in a soluble condition throughout the naphthalation dyeing operation. Most dyers do not allow sufficient caustic soda in the charging or springing bath as a certain percentage will be taken up by the cotton yarn or raw stock being dyed and sufficient amount must remain to keep the naphthal perfectly soluble. Otherwise, the final dyed or coupled shade will crock heavily, due to the finely precipitated naphthalate filtering out of solution onto the cotton fiber and yarn.

The original purpose in the adding of formaldehyde to the naphthalate solution was to impregnate the fibers with formaldehyde so that when the skeins, warps or packages were hydroextracted, after naphthalation, the formaldehyde would hold sufficient moisture uniformly throughout the yarn so as to prevent any partial drying out prior to the coupling operation with fast color base solution.

Old and New Machines

If the naphthalated goods dried out in places while the remainder of yarns were moist, then the moist yarn would couple and give the desired shade while partially dried out yarn would couple partially, giving a weak shade or only that of the naphthalated goods. Hence, on the older package dyeing machine where the packages were removed for hydroextraction, formaldehyde was always used if recommended for the particular naphthal being dyed, and the same was true of dyeing skeins and warp; formaldehyde was always used and the naphthalated goods were carefully covered with moistened cloth to prevent the drying out before coupling.

Now, with the newer package and raw stock dyeing machines possessing special means to remove the excess naphthalate solution from the yarn or raw stock by hydroextraction through forcing air through the yarn and stock while in the machine, there is not as great a need for using for-

maldehyde as on older machines and methods because the yarn and stock are within the machine or handled quickly outside and cannot dry out in spots like being hydroextracted or handled separately in a regular hydroextractor.

Use of Salt in Naphthalate Bath

In the dyeing of most substantive and less substantive naphthols, to secure the best color value the use of common salt is recommended, but a dyer must use the minimum amount needed, as an excess of salt in the naphthalation bath to precipitate the naphthal solution causes crocking on the final coupled shade.

On some substantive naphthols, up to medium depth shades, it is not desirable to use salt and then only sparingly on the heavy shades, as the whole question before the dyer is how can he obtain a final dyed naphthal shade that is as free from crocking as humanly possible.

The dyer then must decide whether it is best to reduce the amount of common salt to a minimum or omit it than to then give the naphthalated material an extra cold salt rinse to remove the excess naphthalate on the yarn or stock so as to keep the crocking to a minimum. Common salt is preferred by most dyers to using Glauber's, as it is less expensive and is easily removed in rinsing.

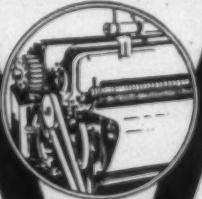
Controlling the cold salt wash of naphthalated material is one of the most important steps in working out a naphthal dyeing procedure that will give a dyer uniform results from lot to lot. Yet, it is the most carelessly handled, and most of the carelessness rests with the dyer and the dyestuff companies' technical men in not giving explicit instructions.

To secure uniform results from one dyelot to the next, the naphthalated goods must be salt rinsed at approximately the same temperature with the same strength of salt brine (dissolved salt) each time. Otherwise, one dye lot will come up heavy while the next will be light, due to the varying amounts of naphthal removed from the naphthalated goods during the salt rinse.

During the winter months, the water supply is cold and

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the average temperature of the cold salt wash is never over 70° F., and very seldom does the dyer have a noticeable variance in shade on a standard naphthal shade. If so, it is caused by some carelessness elsewhere in the dyeing procedure.

Warm weather brings the temperature of the water supply up past 90° F., and when it gets into the warm dyeing machine which has just finished the naphthal bath, then the salt wash bath is usually around 90 to 100° F., which is too hot for satisfactory salt rinsing, as there is an excess of alkali in the bath and with that hot a bath, there will be a very severe re-dissolving of naphthal from the naphthalated yarn or raw stock during the so-called cold salt washes. To prevent this, a dyer should fill the expansion tank with ice and then give a salt rinse at not over 80° F., preferably 70°F., both winter and summer. Naturally during the winter the ice in the expansion tank is not necessary.

It is much cheaper for a dyehouse to run cold salt washes on the naphthalated yarn and raw stock than it is to have to remove the packages and hydroextract, when there is not any air pressure blowing equipment on the yarn machine.

Most raw stock machines are now equipped with blowers, and a dyer can blow the stock five to 20 minutes, then give it one or more cold salt washes at 80° F. or lower. It is best to give two salt washes if the bath is 80° F. or lower. If not, then remove yarns and hydroextract them and then salt wash at lowest temperature possible with plant water supply. For the most uniform results on shade and general fastness, most naphthal dyers find that two salt washes at 70-80° give the best all around results; better than removal and hydroextractions and then salt rinsing. On the new machines, having the air blowing equipment, good results are obtained through the use of it prior to salt rinsing at 70-80° F.

Addition of Wetting and Leveling Agents

Many dyers of naphthols on old and the most modern stainless steel machines have tried out using various agents in the naphthal bath to improve the levelness and penetration of the yarn. Results obtained from these plant tests do not show any particular improvement obtained from the use of wetting and leveling agents on most of the naphthols though on some special shades, where two or more naphthols are required, it has been found of some value to use a leveling agent possessing retarding action to make two naphthols exhaust at the same rate. For the best results, the best informed naphthal dyers and plant chemists have found from experience it is advisable to use only alcohol and caustic soda in preparing a naphthalate bath.

There are some exceptions to this general rule and these may be listed as:

1. Hard water conditions (lime and magnesium).
2. Water supply containing iron and other mineral impurities.
3. Water supply from a swampy area.

When a dyer is confronted with one of these water supply problems, it is then advisable to use a small amount of a water softening or treating agent that will help to buffer the naphthalate solution and prevent precipitation during the dyeing operation. Well boiled out yarn or raw stock and then a hot rinse to remove any traces of wetting agent is usually the best way to insure a level and evenly dyed naphthalated goods, free from crocking.

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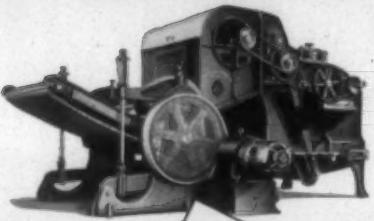


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Chemical Industries Exposition To Feature Interesting Equipment

Laboratory methods which are new, and testing equipment that will speed war production, saving millions of dollars in waste, will form an important contribution to the 19th Exposition of Chemical Industries, scheduled for the week beginning Dec. 6 in Madison Square Garden, New York City.

Rapid and spectacular as has been the march of the chemical industries drafted into the war program, the pace of progress in the laboratory has been even more rapid. But the modern laboratory is as unspectacular as the weird skeleton of the modern chemical plant is eye-filling, and few persons outside the technical ranks have any comprehension of its real worth in the industrial picture.

The modern laboratory has been called the "Control Tower of War Industry," since it controls production, aids research and safeguards public health. This represents a dual role which it is important to separate, because the two branches serve entirely different purposes.

By providing rare and specific chemicals of uniform purity and scientific instruments of remarkable accuracy the chemical industry itself furnishes the researcher with the implements of wider and more exact knowledge of matter and the substances composing it. But by providing industry with standard chemicals for comparative purposes, and special instruments and equipment to measure successive steps in processing, this branch of the chemical industry also provides the means for economic control in manufacturing of every description.

It is not too much to say that the integration of subcontractors into large scale war production has been accomplished very largely through the successful application of advanced methods of testing and inspection through modern instrumentation. Many testing appliances, developed from the older and cruder hook-ups of the research laboratory, have come into use since the war began. Progress along this line since the last chemical show in 1941 has been remarkable. The uses of such revealing instrument test methods are also spreading rapidly in many productive fields.

Labor Settlements Are Summarized

Good industrial relations grow out of the experience of labor and management working together, Secretary of Labor Frances Perkins said recently in making public a report on "Settling Plant Grievances," prepared at the request of a group of industrialists and union leaders. It summarizes the experience of many large corporations and labor unions in working out grievance machinery in their own collective bargaining units.

"The Government should and does set forth the rules of the game as determined by public policy," Secretary Perkins said. "In extreme cases the Government acts as umpire or judge when industrial strife threatens the public interest. But the positive development of industrial harmony begins at the plant level with the intelligent handling of plant grievances."

"Plant experience clearly indicates that fuller utilization of grievance machinery throughout American industry would materially reduce the number of disputes coming before Government agencies today. Even more important,

where labor and management can settle their differences directly, the results show up in terms of higher morale, greater plant efficiency and increased production.

In publishing this bulletin, the Department of Labor hopes to accelerate the development of good grievance procedure. Samples of forms and procedures in use by various companies and trade unions are included in the publication.

"Settling Plant Grievances," prepared by the department's Division of Labor Standards, is available on request.

Bag-Closing Twine Situation Clarified

Premiums that may be added to producers' maximum prices for sales of bag-closing twine to purchasers for their own use and not for resale were given specifically by the Office of Price Administration Oct. 4. The action enables bag manufacturers who produce the twine and sell it to buyers of their bags to obtain the customary mark-up to cover the costs to them of such distribution.

Before the action, said OPA, bag companies and producers of sales yarn who made bag-closing twine and sold it to bag users could charge under OPA regulation only the manufacturers' maximum price, in spite of the fact that they performed an additional distributive function. At the same time, bag companies which did not produce the twine and which could qualify under the OPA definition of "jobber," were permitted to charge jobbers' premiums.

This inequality is removed by Amendment No. 5 to Maximum Price Regulation 33, Carded Cotton Yarn and the Processing Thereof, effective Oct. 8, 1943, which enables producers and non-producers of the twine to sell it to users on the same basis.

The maximum price for bag-closing twine when sold to a purchaser for use and not for resale now becomes the applicable maximum price for the yarn plus the following premiums:

Sales quantities:	Premium (percentage of applicable maximum price)
100-pound lots or less	10
101 to 500-pound lots	7½
500-pound lots or more	5

OPA said that the cost of twine used to close bags is so extremely small in comparison with the value of the bags or their contents that the added premiums will not affect the cost of living.

In the same amendment OPA revoked Section 1307.55 of Maximum Price Regulation 33. This section called for monthly reports of sales of carded cotton yarns at prices above or below the applicable maximum price as a result of adjustments. This section, OPA said, has never been put into operation, as its use was found to be unnecessary.

Container Re-Use To Be Encouraged

The containers division of the War Production Board is launching a container re-use program for the voluntary participation of all users of shipping containers. A complete educational presentation and explanation of this program has been prepared for persons concerned with the problem of obtaining enough shipping containers during the present war emergency. This presentation will be given by representatives of the WPB containers division to Southern manufacturers at 2 p. m. Nov. 2 in Atlanta, Ga., at the Ainsley Hotel.

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Of Textile Bulletin, published Semi-Monthly at Charlotte, N. C., for October 1, 1943.

State of North Carolina

County of Mecklenburg

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Junius M. Smith, who, having been duly sworn according to law, deposes and says that he is the Business Manager of Textile Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, to-wit:

That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, David Clark, Charlotte, N. C.; editor, David Clark, Charlotte, N. C.; business manager, Junius M. Smith, Charlotte, N. C.

That the owner is: Clark Publishing Co., Charlotte, N. C.

That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

(Signed) JUNIUS M. SMITH,
Business Manager.

(Signed) MARGARET L. ROBINSON,
Notary Public.

(My commission expires March 5, 1944.)
Sworn to and subscribed before me this 5th day of October, 1943.

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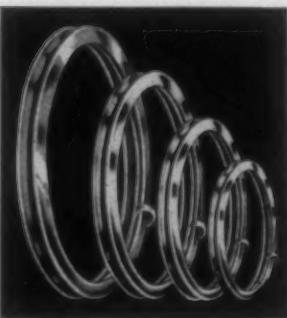


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**Ward Delaney To Explain Purposes
Of New Institute**

Ward Delaney will make one of his first public addresses since becoming executive director of the newly-created Institute of Textile Technology when he appears before the American Association of Textile Technologists at the Builders' Club in New York City Nov. 3.

Mr. Delaney has had an active career in investment banking, research in the oil and gas industry, and lately as a member of the Institute of Paper Chemistry at Appleton, Wis. At the Nov. 3 meeting he will explain the aims, procedure of business and goals of the Institute of Textile Technology.

The A. A. T. T. program committee has also announced that Jerome Udell of the Office of Foreign Relief and Rehabilitation will appear before the members Dec. 1, and that Chester M. Robbins of Aridy Corp. will speak on "Probable Post-War Development Based on Present War Work Research" at the Jan. 5 meeting.

The Institute of Textile Technology, sponsored by 29 active operators of cotton textile mills at present, will be supported by annual dues paid by each member mill. Dues will be a sum equal to ten cents per spinning spindle (in place at the beginning of each dues-paying year) or 25 cents per bale of cotton (500 pounds of synthetic fiber considered as one bale) consumed during the previous 12 months, whichever calculation produces the lower amount.

Weaving mills with no spinning spindles will pay on the basis of 1/20th cent per pound of cloth produced during the preceding 12 months.

Membership in the institute is open to American corporations or allied groups whose principal investment is in cotton mill type machinery, and such groups will soon be invited to join the original sponsors. All mills of an allied group must make application for membership simultaneously, and information received from the institute must be held confidential.

Mr. Delaney has been on leave from the Institute of Paper Chemistry since the early part of the year for work with the Office of Strategic Services at Washington. Prior to his activity in the field of research, he had been engaged in the investment banking business in Shreveport, La.

Sponsors of the Institute of Textile Technology present at a meeting conducted recently were: William W. Allen of Baltic (Conn.) Mills; Arthur M. Allen of Hickley, Allen, Tillinghast & Wheeler, Providence, R. I.; Howard Baetjer of Mt. Vernon Woodberry Mills, Baltimore, Md.; W. N. Banks of Grantville (Ga.) Mills; Fuller E. Callaway, Jr., of Callaway Mills, LaGrange, Ga.; J. A. Chapman of Inman Mills, Spartanburg, S. C.; Herman Cone of Proximity Mfg. Co., Greensboro, N. C.; Norman E. Elsas of Fulton Bag & Cotton Mills, Atlanta, Ga.; G. E. Huggins of Martel Mills, New York; Roger Milliken of Deering, Milliken & Co., New York; Walter S. Montgomery of Spartan Mills, Spartanburg, S. C.; J. A. Moore of Edenton (N. C.) Cotton Mills; Paul A. Redmond of Alabama Mills, Inc., Birmingham; W. H. Suttenfield of American Yarn & Processing Co., Mt. Holly, N. C.; Charles A. Sweet of Wellington Sears Co., New York; Sam H. Swint of Graniteville (S. C.) Co.; Fred W. Symmes of Union-Buffalo Mills, Greenville,



Ward Delaney

S. C.; Gordon Harrower of Wauregan (Conn.) Mills; Harry L. Bailey of Wellington Sears Co., New York.

Sponsors and members, but not present at the meeting, were: William L. Balthis of Balston Yarn Mills, Gastonia, N. C.; Karl Bishopric of Spray (N. C.) Cotton Mills; J. W. Burnett of Southern Weaving Co., Greenville, S. C.; John H. Cheatham of Dundee Mills, Inc., Griffin, Ga.; Wm. D. Ellis of Southern Mills, Inc., Atlanta, Ga.; Julian T. Hightower of Thomaston (Ga.) Cotton Mills; Gerrish H. Milliken of Deering, Milliken & Co., New York; I. C. Milner of Gate City Cotton Mills, Atlanta, Ga.; E. A. Smyth, III, of Balfour (N. C.) Mills; and Wm. A. L. Sibley of Monarch Mills, Union, S. C.

Several Patents Granted To Carolinians On Textile Items

Recent patents granted to Carolinians include a variety of textile items, according to Paul B. Eaton, patent attorney of Charlotte, N. C.

David A. Jolley and Joseph P. Scarborough, both of Kannapolis, N. C., secured a patent on a bobbin painter, Mr. Scarborough assigning all of his interest in the patent to Mr. Jolley. By the use of this machine, the tips of bobbins used in textile machinery can be quickly painted, the insertion of a bobbin in a machine causing the bobbin to rotate and to swing a brush against the tip of the bobbin, and to rotate the brush between each painting operation to present the other side of the brush to the bobbin. It also has means which act between each painting operation to deliver a measured charge of paint to the brush for painting the next bobbins to be placed in the machine.

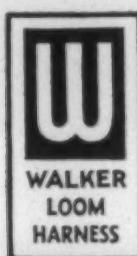
J. P. Lesley and B. G. Martin of Easley, S. C., have secured a patent on an apparatus for stopping a winding beam such as in slashers and the like, or in fact any type of textile machinery where yarn is wound onto a beam. It has means controlled by the size of the yarn beam so that when the yarn beam is wound to a predetermined thickness, the machine can be automatically slowed down or stopped, thus permitting the operator to remove the filled beam and install a new beam in a winding operation.

Other Carolina patentees include Victor Lobl and E. L. McCormack of Spindale, N. C., on a loom reed threading device; George W. Allred of Mayodan, N. C., on an apparatus for cleaning machinery, and assigned to the Bahson Co. of Winston-Salem, N. C.; and Gilbert I. Thurmond and E. Brenner of Hendersonville, N. C., on manufacture of rayon, and assigned to American Enka Corp. of Enka, N. C.

Fibre Containers Banned for Textiles

A shortage of new fibre shipping containers, approximately 15 per cent below demands of military, Lend-Lease and civilian requirements, has made it necessary for the War Production Board to restrict the inadequate supply to the most pressing uses.

To help accomplish this, Limitation Order L-317, was issued Oct. 11. It controls the manufacture and use of new fibre shipping containers, including boxes, crates, cases, baskets or hampers made wholly or in part from corrugated or solid fibre (.060 or heavier). It prohibits entirely the use of such containers for packing certain products, one of which is textiles.



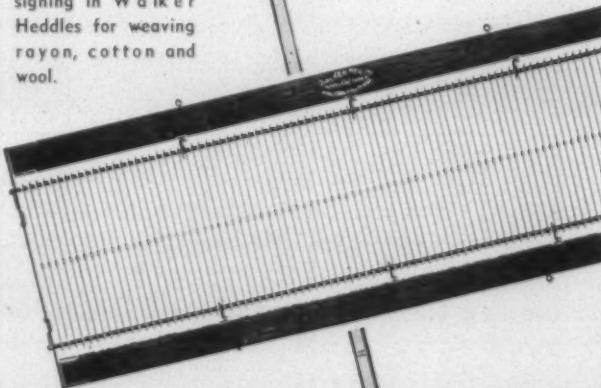
2 THINGS TO LOOK FOR IN BUYING HEDDLES

- 1 Does the designing of the heddle-rod slot accentuate or reduce heddle wear?
- 2 Is the shape of the warp eye conducive to smooth operation; or does it tend to roughen and break the ends?

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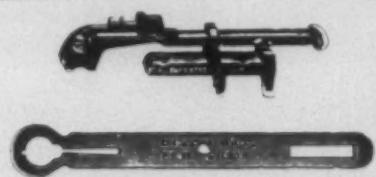
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Cotton Goods Market

NEW YORK.—Unanswered inquiries for all types of goods still clutter up the market, and as far as anyone can tell at present, the situation shows no promise of improving. Buyers seeking goods both on priority and unrated orders have searched the market thoroughly, but have found little success.

Sellers, it pointed out, are still unprepared to let out goods for distant delivery because of the many uncertainties surrounding sales into the future. Releases of cotton goods in recent weeks have all been on a more or less hand-to-mouth basis, mostly small amounts for nearby delivery.

The conclusion that retail stocks are being liquidated much faster than many believe and the lack of goods in wholesale centers to replenish these fast-dwindling supplies are the subject of serious thought in a number of places. The view is held that the maintained high purchasing power of the public will play havoc with what stocks remain unless moves are made either to curtail buying or increase production. Holiday buying appears headed for peak levels, is the view in Worth Street houses, and the acute shortage of goods is likely to make itself felt in the public eye in the very near future.

Higher ceiling prices on essential commodities will prove an incentive to produce an increased quantity of goods of this sort and tend to alleviate shortages, it is pointed out. Textile mills especially are handicapped by the low ceilings, which have prevailed for a longer period than in most other commodities, it is explained.

Elimination of the third shifts in many mills and the depleted condition of the second shift have made themselves felt in the production totals of the last several months.

The huge amount of unfilled Government contracts and priority rated orders backed up by the tremendous demand for consumer requirements is proving discouraging to distributors. Efforts by selling agents to provide the military with its needs, take care of priority-rated orders and at the same time channel some supplies to their regular customers are constantly being met with trouble. No matter which way selling agents turn they are subject to criticism, is the complaint often heard.

Until the current sheaf of large invitations are taken care of there is not much likelihood of an active movement in the market is the prevailing opinion. One recent week was symbolic of the period that the market is passing through, with trading restricted to small lots, mostly on bag goods.

Exports of cottons to Latin America are getting attention in quite a few places in the market and reports are heard from time to time of encouraging results in this program.

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Cotton Yarns Market

PHILADELPHIA.—Reports heard in the market indicate that this month's production of sale yarn will not be much better than that of September. Prospects for the remainder of the year are no better, and 1943 output will be well below that of 1942, although higher than 1941.

Combed sale yarn has almost ceased to be a yarn market commodity for civilian customers because of the large percentage taken up for Government orders. To partly offset the scarcity of combed yarn, the military is prepared to change specifications where necessary, provided a comparable end-product can be obtained. Also, it is now reported, they will attempt to ease their delivery requirements over the first quarter of 1944.

A number of sale yarn spinners are said to have definitely ceased to make certain counts, while others are said to be considering the same course. That some of this yarn is being sought under preference ratings is stated to be unlikely to deter these spinners from discontinuing production of such counts as show them a financial loss.

The alternative might be that the Government would step in to assure sufficient output in whatever counts are deemed essential, in case a further decline occurs in production. But spinners who have been queried in this connection are said to have replied they are willing to have the Government operate their plants on any basis that would ultimately return them to private control in no worse shape than they are now in.

In general, the situation of sale yarn spinners is described as being midway between what was produced in October of 1942 and 1941, respectively. It is pointed out that the marginal machinery and the extra help which enabled the yarn mills to make a great advance in 1942, as compared with the previous year, have now more or less faded out of the picture. Civilian demand for yarn, however, is greater than it was a year ago, suppliers say.

The military demand for cotton items requiring substantial contributions of sale yarn has also increased. Integrated mills, which are beset with manpower and other difficulties, have been relying more heavily on sale yarn. The pressure to obtain carded yarn has increased by reason of the shortage of combed yarn.

Spinners are described as currently in a position where relatively small interruptions often have serious consequences, as in the case of absenteeism, which is beyond their power to correct, but is blamed for widespread loss of production.



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Burlington, N. J., To Be Distribution Center for Glass Fiber Textiles

To speed shipment of critical glass fiber yarns and fabrics to war contractors, Owens-Corning Fiberglas Corp., with general offices at Toledo, Ohio, will establish a central servicing, quality control and distribution point at Burlington, N. J.

Glass fiber textiles are used in plane construction; in shipboard, air-borne and automotive electrical equipment; and for reconnaissance flare shades. Classed as a critical material, they are supplied only under allocation in accordance with WPB conservation order M-282.

The new center will be housed in a building formerly occupied by the Burlington Silk Mill, which is now being adapted to the needs of Owens-Corning. Here will be centralized all servicing of outside manufacturers and customers formerly handled by the Toledo general offices and the factories in Newark, Ohio, and Ashton, R. I.

Approximately 100 will be employed at the Burlington center. Except for key personnel transferred from the company's general offices and factories, all employees will be recruited from among residents of Burlington and the vicinity.

The center was ready for partial occupancy Oct. 1. Full scale operation is scheduled for early November. At the present time no manufacturing operations are contemplated at the Burlington location.

Fiberglas yarns are now being fabricated into the required textile forms in some 30 plants, and are being incorporated into end products by manufacturers in nearly every state.

A. A. T. C. C. Section Names Committees

An address by T. A. Printon, vice-president of National Oil Products Co. of Harrison, N. J., and appointment of two important committees featured last month's meeting of the South-Central section of the American Association of Textile Chemists and Colorists at Chattanooga, Tenn. Approximately 65 members and guests were present.

Jack Anderson, section chairman, announced a special committee to obtain corporate memberships in the area for the association. He explained that funds from these memberships were used to carry on research work. Named on the committee were Marvin Moore, Hosiery Process Co.; W. J. Kelly, Burkart-Schier Chemical Co.; and Nestor Grotelueschen, Magnet Mills.

A nominating committee to put up officers for the December election was named, composed of Herbert Rogers, Walter Hadley and Homer Whelchel of Chattanooga and W. S. McNab of Knoxville.

Mr. Printon warned of the possibility of Government continuing its wartime controls over business in the post-war period.

He declared he would have no fears "if I hear the courageous voice of business" answering those who say business was "inept" and the rigid Government controls should be continued on a permanent basis.

Approximately 1,000,000 bales of cotton linters are earmarked this year for munitions purposes and each bale is sufficient to make 100,000 bullets, Aberdeen Proving Ground officials disclosed recently.

Hunter Marshall Announces Plans for Meeting of N. C. Association

Details of the program of the 37th annual meeting of the North Carolina Cotton Manufacturers Association, to be held in Charlotte, N. C., at the Hotel Charlotte Nov. 12, have been announced by Hunter Marshall, secretary-treasurer.

The meeting will open at 10:30 a. m. in an executive session for textile manufacturers and allied industries. Ellison A. Smyth, III, will present the president's report. This will be followed by a symposium with an address by Major L. P. McLendon of Greensboro, N. C., on the general theme of "Industrial Relations." Major McLendon has had a wide experience with this phase of the textile industry and is qualified to speak with authority. After Major McLendon's address there will be a round-table discussion and a period of questions and answers.

Victor S. Bryant of Durham, N. C., will address the meeting on the theme "Industries' Part in State Finances." Mr. Bryant has served on the N. C. State Budget Commission, and has been a leading figure in solving the state financial problems for a number of years. This address will also be followed by a round-table discussion with questions and answers.

The committee on resolutions will be composed of W. H. Suttenfield, chairman, Carl A. Rudisill, James Webb, B. C. Trotter and Charles A. Harris.

A luncheon meeting will be held at 12:30, which will be open to members and guests. Dr. H. E. Michl, economist of the Cotton-Textile Institute, Inc., will address this meeting on the theme "Post-War Planning in the Textile Industry."

Group To Meet By Mail Again

The executive committee of the Textile Operating Executives of Georgia has decided not to hold a meeting this fall, but, as was the case last spring, will conduct a "meeting-by-mail," this time on the subjects of slashing and weaving.

A list of 22 questions has been sent to members, who have been asked to send in detailed answers. When all answers are in, officials will compile a report which will be sent to the members. Twenty-five-dollar war bonds will be awarded two winners.

At a meeting of the organization's executive committee last month Julian M. Longley of Dalton was re-elected general chairman, W. R. Beldon of Clarkdale vice general chairman and Robert W. Philip secretary and treasurer. The executive committee continued the now expired terms of F. B. Watson and S. A. T. Newsome on the committee until a general meeting is held, at which time their successors will be named.

S. C. Foundation Is Granted Charter

An eleemosynary charter has been issued by the State of South Carolina to the J. E. Sirrine Textile Foundation of Clinton. The foundation is authorized to conduct training in textile skills and develop executive and leadership ability.

Directors are listed as W. H. Beattie of Greenville, George M. Wright of Great Falls, and W. S. Montgomery of Spartanburg.

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preserve the SPINNING RING. The greatest
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the advent of the HIGH SPEED SPINDLE.

NATIONAL—ETARTNEP FINISH
A New Chemical Treatment

Manufactured only by the

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Bob Philip To Become Executive Director Of Callaway Institute

Robert W. Philip of Atlanta has resigned as editor of *Cotton* and vice-president of the W. R. C. Smith Publishing Co. to become president and executive director of Callaway Institute, Inc., of LaGrange, Ga. He will assume his new duties on or before Jan. 1.

Mr. Philip succeeds, as president of the institute, Fuller E. Callaway, Jr., and, as executive director, Perrin N. Collier, who has resigned to devote his full time to the position of vice-president and general manager of the newly-formed USEO division of Callaway Mills.

Mr. Philip, a native of Jewell, Ga., has been connected with *Cotton* since 1919, and has been its editor-in-chief for the past 15 years. The new head of the institute has served as secretary-treasurer of the Textile Operating Executives of Georgia since its formation in 1922. This organization, composed of the superintendents and department heads of the textile mills of Georgia, has devoted itself to the improvement of manufacturing methods and practices, and the elevation of the personnel and mechanical efficiency of the mills of the state. He has been chairman, and is now national councilor, of the Southeastern Section of the American Association of Textile Chemists and Colorists.

Callaway Institute, Inc., is a self-contained institution, devoted to research, science and education, whose facilities and services are available, under contract, to any mill or other element in the textile industry or to any other type of business it is qualified to serve. It was chartered early this year as a separate institution, acquiring as a nucleus the staff and equipment of the research department of Callaway Mills, which had grown steadily since its establishment in 1938 to a point where it is now an outstanding research agency in the textile industry.

The program of the institute embraces (1) research on specific projects in which its relations with each client is on a contractual and entirely confidential basis; (2) scientific investigations of its own, both fundamental and applied in character, and including an interest in chemical nature, physical properties, and mechanical adaptability; and (3) a broad educational purpose of preparing adequately trained manpower primarily, but not exclusively, for the textile industry. The matter of imparting the results of research is on the basis of private and confidential relation to the projects of an individual sponsor, but in the broader sphere it proposes a useful and needed service of reducing to the lowest common denominator the complexities of a general problem and making available not only the results of work done in the institute, but also the accumulated knowledge of the published work on a given subject.

The institute occupies a building of its own, especially

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All Type Colors on Cotton Yarns

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Bob Philip

designed and equipped for its needs, adequate for future expansion, and is staffed by an extensive personnel of scientists, educators, technologists and practical men. It maintains in a library of more than 2,000 volumes perhaps the most complete collection of literature in the textile industry under the supervision of a full-time librarian, and operates a patent department whose services are available to clients separately, and as an essential and invaluable adjunct to all forms of research.

Use of Asbestos Fibers Restricted

Restrictions on the use of Canadian asbestos spinning fibers have been imposed by the War Production Board, effective Nov. 1. The restrictions were issued in the form of a revision of Conservation Order M-79, in view of an anticipated shortage of certain grades of asbestos fibers.

Discrepancies between the supply and consumption of Canadian asbestos fiber cannot be permitted to continue without seriously endangering the inventory position of manufacturers using these particular grades, W. T. Meloy, director of the WPB cork, asbestos and fibrous glass division, stated.

Specifically, the restrictions on the use of Canadian asbestos on hand Nov. 1, provide that no person shall process Canadian crudes or spinning fiber grades 3F or 3K for commercial grade textiles. It is further provided that no person may accept delivery of these grades for the manufacture of compressed asbestos sheet packing.

Norlander-Young Partnership Is Formed

As of the first of this month, the Gastonia, N. C., branch of Norlander Machine Co. will operate under the name of Norlander-Young Machine Co., due to a change in ownership status. A partnership at the Gastonia plant has been formed by the former owner, Albert Norlander of New Bedford, Mass., and Frank A. Young of Gastonia, former manager.

Mr. Young, as general manager, will have complete charge of operations at the Gastonia plant as heretofore, and Mr. Norlander will serve as secretary and treasurer at New Bedford, from where all accounts will be paid.

Australia Grows Its Own Flax

Australia has become self-sufficient in the production and processing of flax. The total acreage now sown in flax is 70,000 acres, compared to around 2,000 acres before the war.

All of the linen thread now used in Australia, principally in the manufacture of service equipment for the Australian and American armed forces, is made of Australian flax.

In addition Australia is making from its own flax, parachute harness, various kinds of cord, and webbing for belts and other parts of soldiers' equipment.

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In this vital work, Burkart-Schier is playing an active part. For Burkart-Schier technicians and textile chemicals are working right along with the country's mills, helping to process all sorts of military fabrics, giving them needed characteristics, making fabrics worthy of men and women at war.

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Manufacturing Chemists for the Textile Industry

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RAYON AND COTTON**

It's a new era for cotton and rayon full-fashioned... they're in the Army now. It's a new era, too, with new problems for finishers, but Laurel Oils and Finishes can simplify their full-fashioned processing. Available for immediate delivery.

Laurel Emulsions give more even cotton yarns, clearer stitch and proper regain.

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Laurel Hosiery Finishes produce the smooth finish that is the pride of the American woman whether on parade or promenade.

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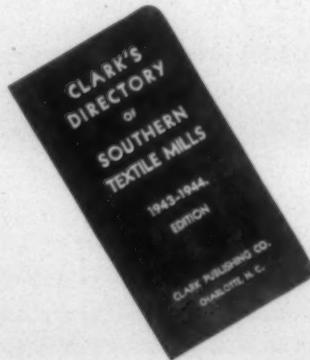
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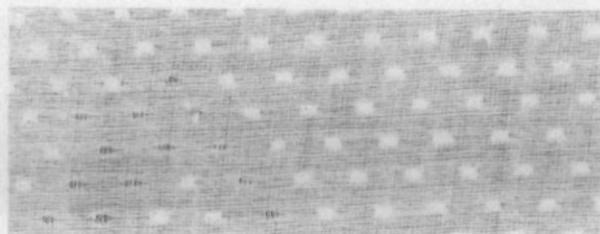
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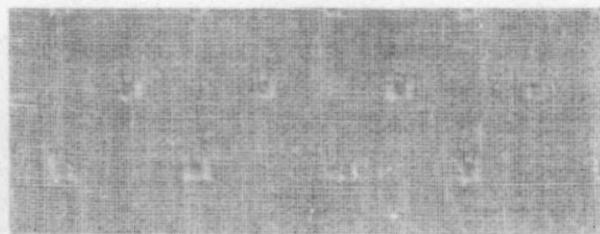
(Continued from Page 24)

several empty dents between the cord and selvage. The heddle can be put on a separate harness shaft with shaft connected to a harness lever in the dobby in the usual manner, but operated only when the extra filling is being inserted. This holds the filling outside the selvage. When a length of fabric has been woven this cord becomes slack



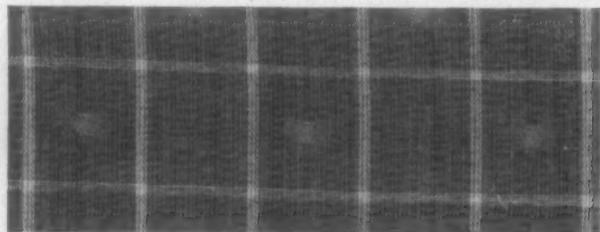
281-A

and the slack must be taken up. If this is not done, the cord will be pulled into the spot near the edge of fabric and will make a defect in the fabric.



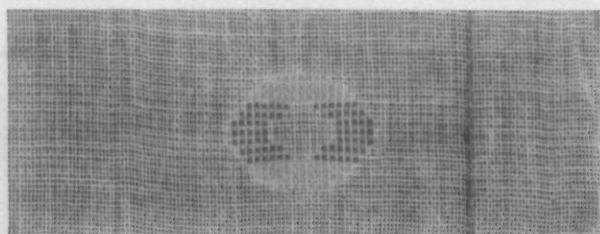
281-B

In estimating the cost of these fabrics, the production has to be carefully considered. The more extra filling there is in the fabric, the more the fabric will cost to produce, since



281-C

the extra filling does not actually form the fabric and the take up gears are stopped on those picks, thereby allowing less production from the loom.



281-D

Many of these fabrics with the smaller dots are often sold as Dotted Swiss. There is, however, quite a difference between a real Dotted Swiss and the dot made with extra

Cloth Insulated With Aluminum Paint

A University of Minnesota professor is hoping his recent successful experiments in insulating cloth with aluminum paint may help bring comfort to soldiers fighting in cold climates in this war.

Results of the experiments have been disclosed by Dr. Clifford A. Kirkpatrick, who deserted the field of chemistry to specialize in sociology. News dispatches telling of the frigid weather in which the Russians and Finns fought in 1940, he said, prompted the experiments.

The experiments, he explained, were conducted in a home-made chemistry laboratory dominated by soda water bottles and canvas gloves, plus aluminum paint and aluminum foil with the sole object in mind of producing lightweight, cold-resistant and heat-retaining cloth. In some of the experiments, Dr. Herman Kabat, University of Minnesota physiologist, helped him.

From bottles and gloves, Dr. Kirkpatrick experimented with animals and here again, he said, aluminum-treated blankets helped anaesthetized animals keep their body heat better than untreated ones.

Dr. Kirkpatrick has turned over his idea to the Textile Research Institute, Inc., and to the Textile Foundation in New York, he said.



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Comparative Manufacturing Performance and Fiber Properties of Certain Long-Staple Cottons

(Continued from Page 22)

substituted successfully for the stronger and smoother S x P in manufacturing finer counts of yarn.

No difficulty was experienced during the manufacturing processes with any of the cottons except Peruvian Tanguis. The variety was made into 60s satisfactorily but end breakage on 80s was high and on 100s it was excessively high. The other cottons had very little or no end breakage even on 100s yarns. In reporting on the performance of the various growths during manufacturing, the laboratory technologists made the general observation that the Egyptian and Sudan growths seemed to process slightly better than the others.

Analyses of fiber properties were made to determine length, fineness, percentage of thin-walled fibers, tensile strength, and cellulose alignment by the X-ray method. The results of these Department of Agriculture tests are of interest in characterizing the cottons and in explaining to some extent the spinning results.

Egyptian and Sudan cottons were, on the average, not as fine-fibered as was the S x P variety, but finer than the Wilds 13. Peruvian Pima was about the same in this respect as S x P but the Tanguis variety, one of the shorter cottons in the test, was considerably coarser-fibered. The Giza 7 sample had the fewest thin-walled or undeveloped fibers of the varieties tested and would be classed as mature-fibered. The percentages of thin-walled fibers in the other samples were within the range expected for normal cottons.

Fiber tensile strength was slightly better for SP x Sak 35 than for the other cottons. The good fiber strength of this new variety is confirmed by the small X-ray angle, a characteristic that is indicative of good strength. The next best cotton with respect to fiber tensile strength was Wilds 13 which averaged a little stronger than the Egyptian or Sudan cottons. S x P had a lower fiber strength than the average of any of the imported growths.

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Many Yards of Jute Being Bought Yearly From India

The United States Government is buying from India millions of yards of burlap, a coarse fabric that provided the sackcloth of Dundee, Scotland, and added a romantic chapter to the story of clipper-ship commerce, say the National Geographic Society.

Like many Scotch cities, Dundee, third largest, had textile mills, mostly linen. Jute fiber had not found favor; it lacked natural moisture, was too dry to spin well.

Dundee was a whaling center. During a hemp shortage in 1832 it was discovered that whale oil made jute suitable for spinning by power machinery. Whale oil greased the industrial progress of "the Cinderella of the fibers."

By 1835 Dundee mills were turning out pure jute yarns. In 1838 they were making burlap. Two years later a clipper ship docked at Dundee with the first cargo of more than a thousand bales of jute direct from Calcutta.

Dundee's burlap industry was boosted when burlap bags were substituted for flax shipping sacks. This new demand began when the Dutch government in 1838 placed an order in Dundee for bags in which to ship coffee from the Netherlands East Indies.

Baltic countries were then the main source of wax. With the outbreak of the Crimean War in 1854, this source was cut off and Dundee's burlap industry boomed. Jute proved to be the best substitute for flax.

As with flax, so with cotton. When the Civil War put a crimp in America's cotton production, Dundee's mills worked overtime to supply the demand for burlap.

India, world's largest source of jute, entered the burlap business, and her cheaper labor helped break Dundee's hold. Some "jute palaces," which had gradually spread westward along the north bank of the Tay River, became ghostly reminders of Dundee's burlap boom.

Dundee's linoleum factories, however, still require quantities of burlap. The Scottish city began shipping jute machinery to Calcutta and now equips most of the Indian industry.

The first power-driven mill for spinning jute yarns in India was set up in 1855 at Rishra, 12 miles above Calcutta on the Hooghly River, and soon produced eight tons a day. Four years later the first power loom mill for making burlap was established at Barnagore. It had 192 looms. Not until 35 years ago did the mills of India spin more jute than India exported. They normally produce 90 per cent of the world's burlap, and use more than a million tons of jute a year.

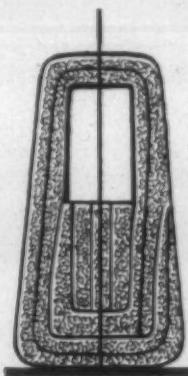
The United States, now India's largest burlap customer, imported \$25,000,000 worth the year before the war. The next year the figure jumped 75 per cent. Normally, three-fourths of the United States imports go into burlap bags. California uses nearly 40 million bags for its grain crop.

Army housekeeping items include cotton sheets, cotton pillows, cotton mattresses, cotton towels and cotton duck pup tents. These are only a few of the multitude of cotton items used in the tremendous "housekeeping" job of the U. S. Army. It takes 122.18 yards of cotton to maintain an American soldier one year.

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The picker built for the high-speed looms. This picker is manufactured to exact dimensions from heavy restretched buffed hair leather, guaranteeing smoother and more perfect performance and longer life.

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This is the best leather loom strap that can be made. Costs more—but worth it!

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Twelve Combed Yarn Mill Officials Named To OPA Committee

Twelve producers have been named by the Office of Price Administration to a combed sales yarn producers industry advisory committee.

They represent all branches of the industry according to its geographical location and also size of business, and are appointed in accordance with the current program of OPA to set up advisory committees from industry covering as much as possible of the entire field of OPA operation.

Problems on which the newly-appointed committee will advise are those affecting sales yarn which are under the operation of Revised Price Schedule No. 7, Combed Cotton Yarns and the Processing Thereof. The first meeting of the group will be called by OPA for a date that is not yet determined.

Those appointed to the new industry advisory committee are R. D. Hall, Stowe Thread Co., Belmont, N. C.; Arthur K. Winget, Efird Mfg. Co., Albemarle, N. C.; Caldwell Ragan, Ragan Spinning Co., Gastonia, N. C.; A. G. Myers, Textiles, Inc., Gastonia; S. M. Butler, Carlton Yarn Mills, Inc., Cherryville, N. C.; J. S. Verlenden, Standard-Coosa-Thatcher Co., Philadelphia, Pa.; George W. Boys, Green River Mills, Inc., Tuxedo, N. C.; Percy S. Howe, Jr., American Thread Co., New York City; S. Eugene Jackson, Crown Mfg. Co., Pawtucket, R. I.; John F. Glennon, Quisett Mill, New Bedford, Mass.; C. K. Torrence, Superior Yarn Mills, Inc., Mount Holly, N. C.; and William L. Balthis, Peerless Spinning Corp., Gastonia.

WPB Asbestos Textiles Orders Combined

To effect further simplification of War Production Board orders covering asbestos textiles, Conservation Orders M-123 and M-283 have been combined. Order M-283 was formerly an allocation order, and Order M-123 was a limitation order outlining certain restricted uses of asbestos textiles. Amended Order M-283 issued Oct. 11 covers both the allocation of asbestos textiles and the prohibited uses,

the cork, asbestos and fibrous glass division of WPB stated. Order M-123 was revoked, its substance having been incorporated in M-283.

There is no major change in the allocation procedure; it remains essentially the same as that outlined in the former Order M-283.

The order, as now amended, places further restrictions on the grade of asbestos, and the cut, or size, of asbestos yarns which may be used in the production of base fabrics for laminated plastics, mechanical packings and gaskets, and friction material.

Plans Completed for Inter-sectional Contest

Details of the joint New York section and fourth annual inter-sectional contest of the American Association of Textile Chemists and Colorists meeting Oct. 22 at the Downtown Athletic Club, New York City, have been announced by Norman A. Johnson, secretary. The technical part of the program will consist of a presentation of the various papers representing seven of the organization's major sections. Included among the papers to be presented will be the following: "The Effect of Raw Stock Dyeing on the Fiber and Manufacturing Properties of Cotton," by Perrin Collier of the Southeastern section; "A Proposed Method for the Evaluation of Detergents," by Hobart Souther of the Piedmont section; and "The Processing of Acetate Full-Fashioned Hosiery," by J. A. Crumley of the South Central section.

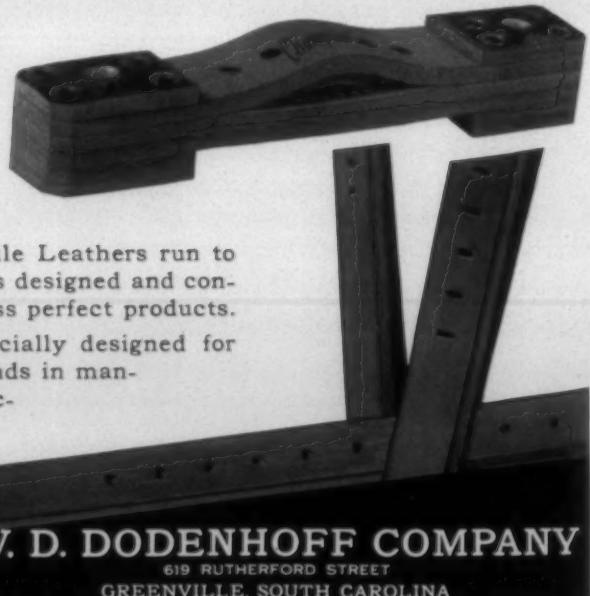
Diapers Now Made of Paper

Another inroad into the textile market has been made by paper manufacturers, their latest being a victory disposal diaper. Designers of the three-cornered pants say the new diaper, made of soft absorbent paper which comes in a roll similar to paper towelling and which is said to present no laundry or disposal problems, was the direct result of a "growing and serious demand on the part of stores all over the nation."

Name Your Own Specifications for Champion Textile Leather Products

As is to be expected, Champion Textile Leathers run to special jobs—the hard and difficult jobs designed and constructed to overcome the failures of less perfect products.

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American Cyanamid Chemists Develop Chemical Which Aids Airmen

A chemical that lights up the water of the ocean, making a huge yellow patch visible several miles away in a plane 10,000 feet in the air, is one of science's contributions looking toward the safety of American airmen. The solution, described officially for the first time, will enable searching planes to discover and rescue airmen who have been shot down in action, whether they are afloat in life rafts or floating alone in life jackets.

The contents of a package three inches by five will light up a patch of sea 40 feet in diameter and instead of being just a surface slick easily dissipated by the waves, the patch is tri-dimensional, having width, length and depth.

According to the Naval Bureau of Aeronautics, research and development engineers for pilot safety, the naval attache in London reported to the Navy Department in Washington that German pilots were equipped with rescue markers.

Chemists of the Calco Division of the American Cyanamid Co., who had helped develop sulfa drugs and numerous other war materials, were called to Washington. Within a short time the answer was found in fluorescein, a material that at one time was used to discover leaks in water systems. The minute it touches the water it not only spreads with great rapidity, but sinks to a depth of several feet, thus creating a block which wave action does not disintegrate over a period of from two to three hours.

The package of "Dye Marker," as it is officially known, is cemented to the aviator's life jacket and has a rip flap, somewhat similar to the rip-cord of a parachute. When a flyer lands in the water, he waits until a rescue plane is within range before breaking the seal. He must be certain, however, that it is a friendly plane before he marks his position. Life rafts also carry cans of "Dye Marker."

American Cyanamid Co. has over 600 chemists whose sole work is research and developing chemicals for both war and post-war uses. Its plants are located in various parts of the country, making agricultural chemicals and fungicides, plastics, vitamins, drugs, including the sulfa drugs, several of which they alone developed, treating blood plasma, surgical sutures, as well as a wide variety of textile dyes. The company, one of the four large chemical operations of the country, has had awards of the Army and Navy "E" in eight of its plants and subsidiaries.

Sees Big Future for Glass Fabrics

Spun glass for fabrics has a great future, a scientist said recently, and the post-war Cinderella may wear a fadeproof glass dress—to match those fairy book slippers.

Dr. Hilton Ira Jones, chairman of the American Institute of Chemists, said that after the war women will be able to buy dresses made from the new material and they won't fade, shrink or mold, and will cost less than cotton frocks. He displayed a dress made of the new material which he said cost \$7 a yard for 50-inch width.

Good transparent tracing cloth is now made of cotton, and displaces linen which was thought to be necessary until recently. Micro-weave tracing cloth is an all cotton cloth of extremely fine, uniform weave surfaced for either pen or pencil, and having high transparency.



THE CHARLOTTE LEATHER BELTING COMPANY announces a new leather belt which is made from a specially prepared leather just made available to Charlotte. This leather, which is of a straight vegetable tannage, has proved its superiority in literally thousands of belt applications throughout American industry. It was developed after long and costly experiment and research, resulting in a definite improvement in all of the characteristics required of a good belt—Minimum Stretch, High Tensile Strength and Positive Pulley Grip.

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THE NAME SOLVAY IS YOUR ASSURANCE OF QUALITY

A Southern Cotton Manufacturer

Looks At Renegotiation

(Continued from Page 16)

Let me now give you the reasons why I believe this: I believe that we in industry as well as you in Congress realize that there are two methods by which the government recovers what is called profits:

(1) The taxing machine which measures profits as net income, measures excess according to a statutory formula, with so-called general relief provisions, ten per cent of excess-profits tax as a post-war reserve, and so forth. All of this is for the purpose of realistically fitting the tax machinery to the taxpayer's case. The law is initiated by you gentlemen and enacted by both houses of Congress in the most deliberate process that is accorded any form of legislation.

The renegotiation statute providing for recapture of excessive profits was enacted in April, 1942. The 1942 Revenue Act was not enacted until late October, 1942. The 1942 Revenue Act, as I recall, raised the normal and war surtax rate from 31 per cent to 40 per cent. It raised the excess-profits tax rate from a maximum of 60 to 90 per cent with a ten per cent post-war credit. Our position is that the 1942 Revenue Act provided sufficient recapture of profits from industries like the cotton textile industry.

(2) The other process is the renegotiation statute. It leaves to the discretionary standards of men the determination and recapture of excess profits. There is no statutory right to resist their verdict, no way to resist this process should it ever err. It takes away profit before the tax measure can be applied, leaving tax to operate only on what is left. To the extent that it measures and recovers profit, that is, to the extent it performs the taxing functions, it nullifies the taxing status.

I know it is claimed for it that it does not perform a revenue-raising function. It is obvious, however, that it does perform another function of taxation, which is measuring not price but profit and recovering the amount measured, without the sanction of any statutory standard, as the tax law provides, and without the surrounding safeguards which the tax law affords.

The question has been asked, and you will probably ask me, if in specific cases there is any criticism of the renegotiation boards, or any instance in which a contractor is unfairly treated. There are several answers.

The first, and fundamentally best, answer is that I would prefer that I pay my fair share of profit to the government through the tax statute because of the fairness of its processes and the safeguards it affords. Why?

1. Because I would rather trust the safety of the interest I represent to the jealousy guarded and carefully handled taxing machinery than to the discretion of a few men, however able, who now or in the future shall determine how much I shall pay.

2. Because after three years of experience in producing for war the procurement agencies are in a position to arrive at fair prices and costs. This is and has been definite and certain in the cotton textile industry.

3. Because in an industry such as ours, where the products sold to the procurement agencies are the same as those sold in the commercial markets, the renegotiation law imposes a financial penalty upon those mills actively engaged in the war effort, gives a financial reward to those mills which do not participate in it, although their large volume

stems directly from the heavy government expenditures.

In closing, I would like to state that we believe that industries like cotton-textiles who were in large production before the statute was enacted, whose products are standardized and produced both for war and civilian consumption, and are sold under OPA ceilings, should never have been placed under this statute and if the law is not repealed we recommend that industries of this type be exempted as of Jan. 1, 1943.

Pepperell Book Shows Dramatic Role Of Textile Industry

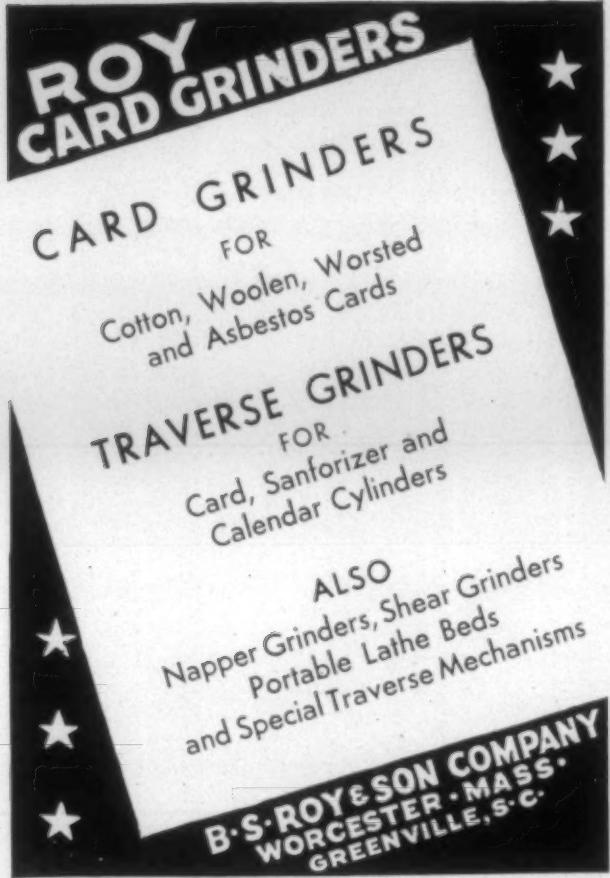
The dramatic new book of Pepperell Mfg. Co., "People of Peace at War," clearly demonstrates the big part the textile industry is playing in the fighting and the winning of this war. The purpose of the book is expressed in the foreword, which describes the textile industry as "but one among hundreds in America that have been called upon to convert their manufacturing facilities to purposes of war," and states that the book has been prepared for those who may perhaps be unfamiliar with the scope and importance of the wartime role of the textile industry.

The foreword concludes: "At present, the textile industry has a three-way job. Next to steel, textiles present the largest single item on the procurement list of the armed forces. The U. S. Lend-Lease Administrator has stated that in North Africa textiles are the most important requirement in the rehabilitation of the civilian population; and they may be expected to play an equally important part in the rehabilitation of other occupied territories as soon as they are freed from the Nazi yoke. Last, but not least, textiles have a vital job to do in helping to preserve our own civilian economy in the midst of war. It is to the industry's fulfillment of this three-fold responsibility that this book is dedicated."

The production of textiles, the book points out on its first pages, seems the same. Battleships, airplane motors, tanks . . . they do not bulk dramatically on assembly lines. The looms weave millions of yards of fabric, just as they did in days of peace. The product, "though the same, is different," different because of its destination, different because of the dogged spirit of the textile workers who are concentrating on their all-out effort. That is the message of "People of Peace at War."

Over 8,500 people of Pepperell are at war. Their deep loyalties keep long-time Pepperell workers at their jobs; newcomers, learning the trade, share quickly the enthusiasm of the others for one of the oldest industries in the world. These people are pictured working at their war jobs in photographs taken, with the exception of a few contributed by the U. S. Army Signal Corps and the U. S. Navy, by the country's leading industrial photographer, Robert Yarnall Richie. The pictures show men at looms, carding machines, testing laboratories, women taking over the jobs of husbands now in the armed forces . . .

The message of the book unfolds on page after page of the people of the textile industry at work. The mills, too, are shown throughout the book, turning out their thousands of yards of essential fabric. The book concludes with striking photographs of cotton at war, on planes, in abrasive cloth, on soldiers and sailors in action who wear Pepperell herringbone twills and Pepperell chambrays.



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Consumer Goods Organization To Include Manufacturing Groups

At a meeting held Sept. 27 in New York City, the Advisory Committee on Ultimate Consumer Goods of the American Standards Association voted to enlarge its membership to include representatives of national manufacturing groups and service organizations as well as to broaden the consumer, and distributor interests that have thus far made up the principal membership of this committee. (The ACUCG advises the ASA on activities in the field of consumer goods standards.) Among the new groups to be invited to join will be manufacturers, trade associations, several additional consumer and retailing groups, and labor organizations.

The committee also agreed to the need of completing as rapidly as possible three basic jobs which must be finished before a large number of needed standards in the field of consumer goods can be undertaken.

Textile Test Methods, which means agreement among laboratories on acceptable procedures for testing textiles, and looking toward uniformity in interpretation of test data.

Definitions for Consumer Goods, a job started a number of years ago to develop a "dictionary" of widely used but variously understood terms in the consumer-retailer-advertising field.

Standards for Children's and Women's Garment Sizes. A standard for boy's body sizes has already been completed, but completion of the others is fundamental to the development of a common denominator in size classifications.

The committee discussed the need of beginning now to plan for the post-war period, recognizing, however, that the introduction of many new materials and methods during the war era will have an important influence on such a program. It was recommended that a planning committee be appointed to:

1. Investigate the commodity field as it is affected by new materials, making recommendations to the ACUCG as the need arises for standards for specific commodities made of new materials such as plywood, plastic, synthetic rubber, etc.

2. Review standards set by the war agencies, especially WPB and OPA, which may lend themselves to the development of American standards in the important field of consumer goods.

3. Review American war standards for consumer goods, making recommendations as to whether they should be adopted as peacetime standards or withdrawn.

Before adjourning, the committee directed its chairman to appoint a small executive committee from among its membership. Duty of this executive committee will be to act as an interim committee in direct supervision of projects; in expediting the development and completion of standards, and maintaining continuing liaison with all sub-committees operating under ACUCG.

Irwin D. Wolf, vice-president, Kaufmann Department Stores, presided over the meeting. Morris L. Chandross, commodities engineer of the ASA staff, was appointed secretary of the committee.

Nurses now wear cotton seersucker uniforms in tropical combat areas. These uniforms blend in with the jungle background, yet still retain a crisp and neat appearance.

Recording Spectrophotometer Seen As Aid In Textile Manufacture

General Electric's recording spectrophotometer is playing a vital role in helping our fighting forces deceive enemy observers. The instrument is being used to match camouflage colors so that they cannot be detected by the enemy's infrared cameras.

Camouflaging, an art which depends on the use of color, suffered a major setback when the infrared camera was developed. Infrared light, which is not visible to the human eye, can be photographed on special film. Thus two objects which to the eye have the same color may photograph differently with the special film, due to different amounts of infrared received from them. This means that the camouflage artist cannot judge from the appearance of a color how it will look to the infrared camera.

But the G-E spectrophotometer, an electronic machine, has now come to the aid of the camouflager. It gives him a measure of color—both visible and invisible—which puts him on an equal footing with the infrared camera. For by determining the amount of light of infrared wave lengths that is reflected by any paint or other material he wants to use, he can tell what effect that material or color will have on the plate of the infrared camera.

The spectrophotometer is indispensable in the visible range, because it insures perfect matching of colors under all conditions. Colors which appear to the eye to be perfectly matched under one light may actually be mismatched under another light. But matches made with the spectrophotometer are identical under all lighting conditions. Hence for many manufacturing processes where extremely accurate color matching is required, such as in making textiles, dyes and paints, the spectrophotometer is a valuable aid.

New Towmotor Model Is Offered

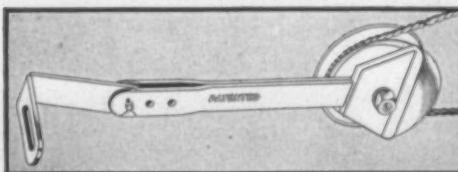
To provide a fork lift truck with a wider range of capacities for efficiently lifting, moving and stacking all types of materials, and at the same time to make production adjustments in line with wartime standardization programs authorized by WPB, Towmotor Corp., Cleveland, Ohio, has developed a new model, designated LT-50.

Available in a 5,000-pound capacity with either 104-inch or 144-inch lift, or in a 4,000-pound capacity with 144-inch lift, Model LT-50 replaces Models LT-46 and LT-53 and rounds out the line of "one man gangs" offered in wheelbases of 40, 44, 50, 56, 62 and 72 inches and having corresponding ranges in speed, load and lift capacities.

Built with balanced specifications characteristic of all Towmotor models, the new lift truck is ideal for materials handling operations in many different fields. Maximum travel speed of Model LT-50 is eight miles an hour; loaded lift speed is 40 feet per minute. A 50-inch wheelbase, outside turning radius of 92, overall width of 42 inches, overall length (less forks) of 88 inches and center underclearances of six inches permit maximum maneuverability in close quarters, along narrow aisles and over steeply angled ramps. Standard fork equipment is of 36-inch length.

The jeep, favorite vehicle of all soldiers, uses cotton in its canvas tarpaulin, top and windshield fabrics, seat upholstery, wire insulating yarns, tire cords and chafer fabrics.

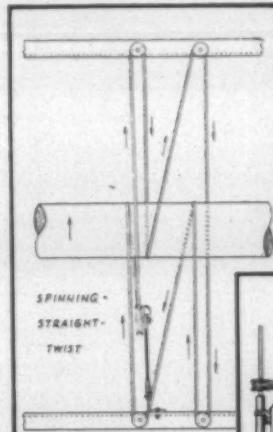
MEADOWS



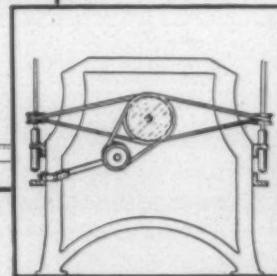
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. . . by eliminating band-slipage and slack yarn; reducing damp-weather, dry-weather and "Monday Morning" band trouble—and assuring you uniform twist and spindle-speed at all times. They're now helping over 750,000 spindles meet Government Specifications.



Ease of installation illustrated at left. Only one 5/16" hole must be drilled through spindle ladder on bottom rail, to install one pulley for every four spindles. No doffing of frames necessary. Lubrication only once every 5000 hours.



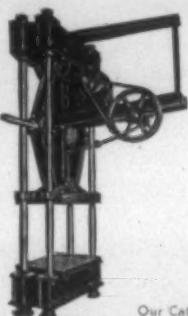
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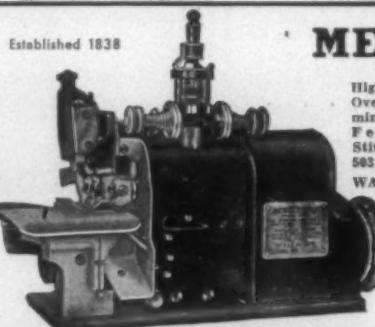


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Fall Meeting of A. A. T. C. C. Piedmont Section Is Scheduled

The Piedmont Section of the American Association of Textile Chemists and Colorists will hold its annual meeting Friday evening, Nov. 5, at Hotel Charlotte, Charlotte, N. C., instead of Saturday, as has been the usual custom.

Crowded hotel conditions at the present time make it impossible to get accommodations for the usual Saturday meeting.

The annual election of officers and entertainment will follow the banquet. Reservations for the banquet should be sent to Leland G. Atkins, Southern Dyestuff Corp., Charlotte. Hotel reservations should be made directly with the hotel as early as possible to assure accommodations.

The Piedmont Section has purchased a total of \$500 worth of Series F war bonds since April, 1943, according to a recent announcement.

The money for the purchase of these bonds was accumulated in the treasury due to the suspension of the summer outings and paid entertainments at the four meetings each year for the past two years. It is assumed that this money will be used after the peace has been declared, or at the maturity of the bonds, to defray the expenses for some worthwhile object closely related to the interests of the Piedmont Section.

The Piedmont Section has had record-breaking attendance at all meetings during the past year, even though unusual difficulties regarding transportation and hotel accommodations had to be faced.

Gunther With Burkart-Schier Laboratory

Donald H. Gunther has joined the laboratory staff of Burkart-Schier Chemical Co. at Chattanooga, Tenn. He will assist in the research and development program of this pioneer Southern manufacturer of textile chemicals and wet-processing agents. Mr. Gunther's background and experience assure he will make a valuable addition to the Burkart-Schier technical personnel. His initial assignment will be in the field of permanent finishes for textiles.

Mr. Gunther was in the research department of the Celanese Corp. of America at Cumberland, Md., before going with Burkart-Schier. He is a graduate in chemistry and dyeing of the Philadelphia Textile Institute, and he holds a degree in textile engineering from Georgia School of Technology. Prior to his work with Celanese, Mr. Gunther was associated with Avondale Mills of Alabama, and with Columbia Mills, Inc., of Minetto, N. Y.

Lieut. Rex Rice is Reported Missing

Lieutenant Rex A. Rice, son of Mrs. Mozelle A. Rice, secretary and vice-president of Blair Mills, Belton, S. C., has been reported missing in action. Lieutenant Rice was serving with the U. S. Army Air Forces somewhere in the European theater of war.

A climatic research laboratory has been established by the Army Quartermaster Corps at Lawrence, Mass., to test cotton and other materials under actual hot or cold conditions. Scientists and 20 soldier volunteers conduct the experiments in special rooms which can be chilled to far below zero or heated to 125 degrees above.

New Section of American Chemical Society Is Organized

The Carolina Piedmont Section of the American Chemical Society was organized by representatives of chemical manufacturing and consuming industries and heads of the chemistry departments of colleges in the Piedmont territory at a meeting held recently in Charlotte, N. C.

Officers elected for the ensuing year are Charles H. Stone of Charlotte, chairman; Charles H. Higgins of Salem College, Winston-Salem, chairman-elect; J. W. Ivey of Charlotte, secretary-treasurer; and Dr. R. H. Gerke of Charlotte, councillor.

Members of the American Chemical Society from Kannapolis, Winston-Salem, Lenoir, Mount Holly, Salisbury, Shelby and Charlotte were present at the meeting.

The position of Charlotte in the chemical industry of the nation is emphasized by the organization of the Piedmont society here, President Stone reported. In this territory are 62 members of the society, and the roster is expected to increase since regular meetings will be held in Charlotte and other cities in the section by the local society.

The next meeting of the section will be held in Charlotte in November, at which plans for the further development of the section will be planned.

The American Chemical Society was organized in 1876 and now has a membership of about 35,000, or more than one-third of all the chemists in the country. Another Carolina branch has headquarters in Raleigh.

The Carolina Piedmont Section embraces the counties of Alexander, Anson, Avery, Burke, Cabarrus, Caldwell, Catawba, Cleveland, Davidson, Davie, Forsyth, Gaston, Iredell, Lincoln, McDowell, Mecklenburg, Montgomery, Richmond, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Watauga, Wilkes and Yadkin.

Coir Fiber Order Is Amended

Order M-312, Coir Fiber and Products, has been amended by the War Production Board to clarify the fact that non-essential uses of coir yarn which do not involve manufacture into any coir product are prohibited.

An amendment to the order which was issued last month also corrected an inadvertent defect in the wording of the order which prohibited the manufacture of rope from any but certain grades, while it was intended that the order restrict the use of these graded to the manufacture of rope.

The new amendment makes it possible for those special grades to be used in the manufacture of matting for ships' fenders for the Army, Navy, Maritime Commission or the War Shipping Administration.

The amended orders prohibit the use of any coir yarn or coir fiber from any use except those specifically mentioned in the order or for which specific authorization is granted by the War Production Board. Preference ratings of AA-5 or higher assigned under the provisions of the previous order are no longer valid. The amended order also provides for equitable distribution of coir and coir products.

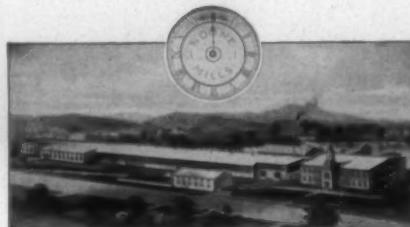
In a record single order, the Army Quartermaster Corps purchased 351,300,000 yards of cotton cloth, and 40,000,000 yards of cotton mosquito cloth—enough material for a barracks bag big enough to hold Honshu Island, largest part of Japan.

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42 Years—Thomas Nelson's Contribution to the Textile Industry

(Continued from Page 18)

was engaged in cotton quality research for the U. S. Department of Agriculture. Before taking the new position, he was research manager for the Textile Research Institute in New York.

Under the new set-up, N. C. State's textile school will continue to advance. The North Carolina Textile Foundation, Inc., organized last winter, has secured a large sum of money in contributions for further development of the textile school. The foundation, headed by W. J. Carter of Greensboro, intends to make the N. C. State school far and away the peer of all other textile schools in the world, with the finest equipment and the finest faculty obtainable. With Dean Campbell at the helm, aided by Dr. Nelson's experience, the textile school seems assured of reaching that goal.

Carding To Be Scrutinized

Cotton carding, recognized as one of the principal bottlenecks in the manufacture of cotton fabrics for military purposes, will be the subject of an intensive research study at the textile school, under the direction of the Textile Research Institute, Inc., of New York City. This project, which has been assigned to the textile school by the institute, will be financed by funds allocated by the production research and development branch of the War Production Board, Washington, D. C. This allocation is a recognition of the importance of cotton carding in the production of military and essential industrial fabrics, and also of the vital part being played by the Textile Research Institute, Inc., in the war effort.

G. H. Dunlap, who recently concluded a preliminary study of the problem of increasing card production, under a grant by the Textile Foundation, will supervise this new and broader research which will be more thorough and far-reaching than any project of this type heretofore conducted. Special attention is to be given to the quality element of the cottons used, and to the physical changes of the fibers themselves under a wide range of carding conditions. The work will also involve analyses of the various types of waste removed, and the spinning and testing of many hundreds of cotton yarns.

Mr. Dunlap recently joined the staff of the textile school of North Carolina State College, co-operating with the N. C. Textile Foundation, Inc., as a liaison man between the school and the mills of North Carolina. Dean M. E. Campbell will have general direction of the work for both the school and the Textile Research Institute. Dean Campbell, who was recently made a member of the institute's technical research committee, has been designated as chairman of the special committee on carding research. Dean Emeritus Thomas Nelson is also a member of the institute's technical research committee.

North Carolina Textiles in Demand

Lend-Lease is unintentionally advertising North Carolina textiles, apparently. The State Department of Conservation and Development has received a request from a Casablanca, Morocco, man for information on North Carolina textile manufacturing.

Wide Use of Flameproofing Chemicals Is Predicted

The modern trend in the use of chemicals for the control of fire emphasizes prevention rather than fire fighting, said H. L. Miner, manager of the Du Pont Company's safety and fire protection division and past president of the National Fire Protection Association, in a recent statement.

Mr. Miner, in connection with Fire Prevention Week, pointed to recent accomplishments of research in flameproofing everyday materials. Paper, cloth and wood now can be chemically treated to make them incapable of spreading flames. Mr. Miner said that there is, however, a wide gap between the present availability and use of fire retardant chemicals, and recommended year around public education through the press to close this gap.

"Practically all kinds of cloth, including the sheerest fabrics, may now be chemically flameproofed," Mr. Miner said. "Treatment is so effective that it is impossible to set textiles or paper on fire. In fact, no after-glow occurs following the use of a new fire retardant based on ammonium sulfamate. Today production is almost entirely devoted to protective garments for the armed forces and for war workers. It will render great service in safeguarding life and property in peacetime."

Fires in flimsy curtains or upholstery in the home, or in combustible decorations and hangings in public places can be prevented, the Du Pont official said. Children's clothing, bath and lounging robes, household linens, upholstery and stage scenery can easily be made totally fire resistant by spraying or dipping. Mr. Miner predicted that laundries and dry cleaning establishments will offer a flameproofing service after the war.

Rayon Shipments Are Up 5 Per Cent

Shipments of rayon filament yarn by American mills to domestic users amounted to 40,400,000 pounds last month, as compared with 41,400,000 pounds shipped in August and 38,400,000 pounds shipped in September last year, states *Rayon Organon*, published by Textile Economics Bureau, Inc.

For the nine months ended Sept. 30, rayon filament yarn shipments aggregated 364,400,000 pounds, an increase of five per cent compared with shipments of 347,900,000 pounds during the corresponding period last year.

Stocks of rayon filament yarn held by domestic producers totaled 7,900,000 pounds Sept. 30, as compared with 6,500,000 pounds held Aug. 31, and 8,000,000 pounds held Sept. 30, 1942.

September shipments of staple fiber to domestic consumers amounted to 13,700,000 pounds, as against 13,800,000 pounds in August and 12,500,000 pounds in September, 1942. Nine months' shipments aggregated 119,400,000 pounds, an increase of five per cent compared with corresponding 1942 shipments of 113,600,000 pounds.

Staple fiber stocks held by producers totaled 2,800,000 pounds on Sept. 30, against 3,500,000 pounds held Aug. 31, 1943, and 4,300,000 pounds held Sept. 30, 1942.

In pre-war days, cotton used in the manufacture of men's trousers amounted to approximately 284,720 bales annually. This, in terms of bales weighing 478 pounds each, accounted for 136,096,160 pounds of raw cotton.



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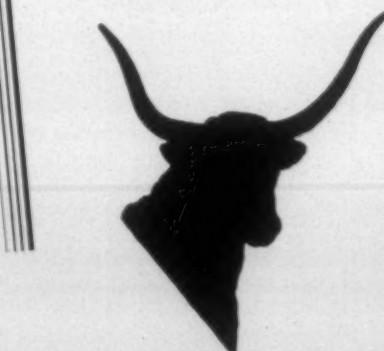
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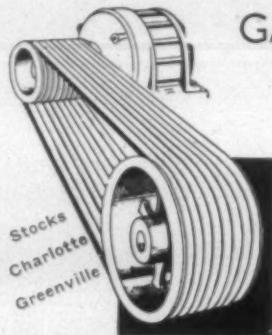
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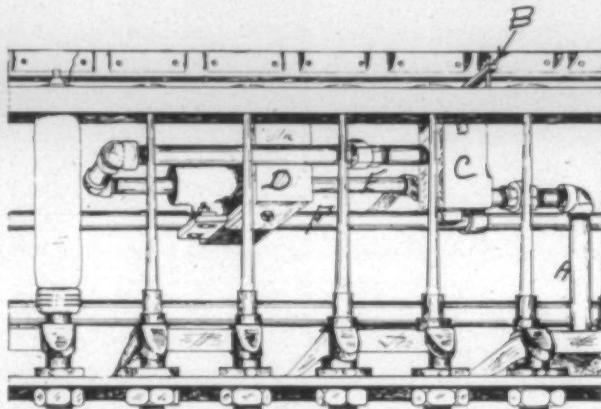
Division of
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North Carolina

Pneumatic Stop Motion Is Announced By Culbreath Firm

The Ernest F. Culbreath Co. of Charlotte, N. C., has announced the O. B. Pneumatic Stop Motion for spinning and twisting frames, which is said to have many advantages over ordinary stop motions. Some of the claims made by the manufacturer are that the motion eliminates waste caused by overrun bobbins and seconds in weaving caused by sloughing of overtun bobbins; relieves operatives of responsibility of watching and shutting off frames when



ready to doff, thereby enabling them to perform duties more efficiently, adding to quality and production; insures uniform packages, as the stop motion can be readily adjusted to knock off a frame at any predetermined size package; is adaptable to either direct motor or belt driven frames.

The motion has been tested for several years in well known textile mills, and has been found dependable and simple to operate because of its uncomplicated mechanism.

In the accompanying illustration (a) represents the main air inlet from blowoff or humidifier line; (b) trip lever set on ring rail for filling wind, but can be set on traverse when warp wind is used; (c) pressure control and equalizer valve which releases blast of air into cylinder (d) when lever is tripped. Air is immediately shut off, eliminating leakage or resistance on shipper; (e) actuating cylinder; (f) attached to shipper rod, or other control; (f) shipper rod, which throws belt or opens switch.

The attachment is said to be absolutely no extra encumbrance on a mill's air system. It is stated that if several frames knock off at about the same time, it is not noticeable on the pressure gauge.

Lieut. (j. g.) Wylie T. Mackie Missing

Lieutenant (j. g.) Wylie T. Mackie, U. S. Navy, son of H. S. Mackie, purchasing agent for Textiles, Inc., Gastonia, N. C., and the late Mrs. Mackie, has been reported missing in action in the performance of his duties, according to word received from the Navy Department by his father. He was stationed aboard a ship sunk near Italy.

Army raincoats are now made entirely of cotton. Their resistance is tested in a "rain room," duplicating any storm. Twenty-eight hundred gallons of water are sprayed on the cotton raincoats and if the wearer gets wet, the coat is rejected.

Four Rayon Producers Get Large Tire Cord Orders

The War Production Board on Oct. 5 ordered a 41 million pound expansion in the existing high-tenacity rayon yarn production program to meet rayon cord requirements for the manufacture of synthetic rubber tires in 1944 and 1945.

The expansion—identical with the one discussed at the Truman committee hearings Sept. 22—increases the total rayon yarn production program for military and heavy-duty civilian tires to 235,000,000 pounds.

Roughly 275,000,000 pounds of cotton tire cord are scheduled for production for use in synthetic tires during 1944. Actual rayon yarn production for synthetic tires in 1944 is estimated at 144,000,000 pounds.

WPB mandatory directives to four rayon producers implemented the order. In some cases, the directives ordered an expansion of present facilities to meet the program; in the remainder, conversion of machines now working on semi-high tenacity yarns for military and industrial purposes was ordered.

Part of the latter production—displaced by the more urgent high-tenacity yarn program—will have to be made up through a further conversion of some facilities now working on civilian rayon yarn. However, officials said that not more than three per cent of the total 400,000,000 pounds of all filament yarns now being turned out for civilians annually will be affected by this conversion.

All facilities involved in the 41 million pound expansion must be in place and operating at capacity by July 1, 1944.

The four companies to which directives were sent are already producing high-tenacity yarns and, officials said, were selected for the additional expansion as a result of a number of considered factors, including manpower availability, unused facilities on hand, demonstrated ability to meet the time-schedule, the cost involved and the minimum impact on the civilian economy.

The firms, together with the amount of additional capacity they are ordered to develop, are: E. I. duPont de Nemours & Co., Inc., Wilmington, Del., 2,000,000 pounds; American Enka Corp., New York, N. Y., 2,000,000 pounds; American Viscose Corp., Wilmington, Del., 28,000,000 pounds; and Industrial Rayon Corp., Cleveland, Ohio, 9,000,000 pounds.

Two companies, American Viscose and Industrial Rayon, also were ordered to establish facilities for making tire fabric from the yarns to be produced. In addition to being time-saving, this move is expected to conserve manpower, critical materials and transportation facilities. It was decided upon after it was revealed that the two mills involved have both the floor space and labor required to take on this additional job.

Dividends Are Voted At Meeting

Directors of American Viscose Corp. at their regular meeting Oct. 6 declared dividends of \$1.25 per share on the five per cent cumulative preferred stock, and 50 cents per share on the common stock, both payable Nov. 1, 1943, to shareholders of record at the close of business on Oct. 18, 1943.

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Reeves Bros., Inc., Acquires Entire Thurston Organization

John M. Reeves, president of Reeves Bros., Inc., announced recently that his firm has acquired the entire W. Harris Thurston organization including the Thurston Cutting Corp. and full rights to Byrd cloth and Airwing fabrics. Present plans do not call for any major changes and business will be conducted by the Thurston personnel as usual in offices at 40 Worth Street.

With the addition of this outstanding firm in the water-repellent and aircraft textile business, Reeves Bros., Inc., further entrenches itself in fields of great present and future importance. Then, too, Byrd cloth comes back home, since for several years this fabric has been manufactured solely at Mills Mill, Woodruff, S. C. Already a principal supplier of uniform fabrics to the Army, Navy and Marine Corps, having delivered over 75 million yards of Army twill alone, Reeves Bros. now takes over the added responsibility of supplying large quantities of Byrd cloth and Airwing fabrics for such vital equipment as airplane, glider and dirigible coverings, Army foul weather, clothing, Army field jackets, Arctic clothing, sleeping bags, parachutes, life vests, life rafts and pontoons.

For the critical post-war selling period, Reeves Bros. sales staff will be greatly strengthened by the addition of the top-flight organization built by W. Harris Thurston. Research and sales experts trained in the manufacture and promotion of wind-resistant and water-repellent fabrics which they pioneered and in technical and mechanical fabrics and tapes, particularly in the aviation industry, will enable Reeves Bros. to serve an increasing group of customers in a diversity of fields.

Outstanding tangible advantages of the acquisition to Reeves Bros. are found in the fact that the Byrd cloth and Airwing trademarks now become its property. This is particularly significant in considering post-war developments since both trademarks are already well identified as standing for highest quality fabrics and present valuable properties ready for extensive promotion as soon as military requirements slacken off and fabrics for civilian use become available.

Byrd cloth, for example, is the cloth with which Thurston pioneered water-repellency and wind-resistance in this country. It was first developed for the use of Admiral Richard E. Byrd on his polar expeditions and has proved itself to be the best substitute for fur in the opinion of both Admiral Byrd and Quartermaster General Gregory of the United States Army. Its versatile use in Army field jackets, summer flight clothing and Arctic wear stamps it with the approval of procurement officers of both branches of the service based upon exhaustive tests both in the laboratory and on fighting fronts. In fact, the volume of Byrd cloth required by our armed forces became so great that it was necessary to rewrite some garment specifications to permit the substitution of certain types of poplins in order to make up the difference between supply and demand. It is certain that the wartime experience of thousands of our soldiers and sailors with this outstanding fabric will insure a heavy peacetime demand for it in a wide variety of summer and winter sports and rainwear.

Airwing fabrics are leaders in the aviation field and were first developed in World War I at which time Mr. Thurston established his reputation as a pioneer in the develop-

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TEXTILE CHEMICALS

ment and production of aircraft fabrics for military use. Since his organization did and still does a major part of the typewriter ribbon fabric business, and because of the close structural relationship between balloon cloths and typewriter ribbon cloths, it was only natural that leadership in one field quickly led to leadership in the other.

The manufacture and sale of quality fabrics "From Cotton to Cutter" has been the constant objective of Reeves Bros., Inc., since its founding in 1920 by the late M. R. Reeves and its present president, John M. Reeves. Since that time, Reeves management and ownership has been expanding—starting with the ownership of Mills Mill, Greenville, S. C., the Woodruff plant was purchased in 1924, expanded and converted to a fine combed cloth mill, and in 1928 the Fairforest Finishing Co. was constructed to complete the process of cotton fabric manufacture. Now with the addition of the Thurston organization, Reeves Bros. give added emphasis to its "From Cotton to Cutter" slogan and becomes one of the outstanding organizations in the cotton textile industry.

Camouflage Netting Production Scheduled

Fourth-quarter production of camouflage netting for the armed forces and fish netting for Lend-Lease and commercial purposes has been put on a completely scheduled basis by the War Production Board.

The action was taken to assure fulfillment of all fourth-quarter requirements and also to maintain proper balance in the output of the three types of netting by individual manufacturers.

A directive sent to the eight netting manufacturers in the field stipulates the exact minimum poundages of each type of netting which must be produced by each mill during each month of the quarter.

Poundages assigned each manufacturer are in direct proportion to his available facilities as reported to WPB. One major effect of the action will be to put production of the various types of netting in balance by the end of the year; likewise, Lend-Lease requirements will be fulfilled. Officials said that total production of fish netting being allocated to Lend-Lease constitutes approximately 8½ per cent of total annual output.

Emmons Appoints Venezuela Agent

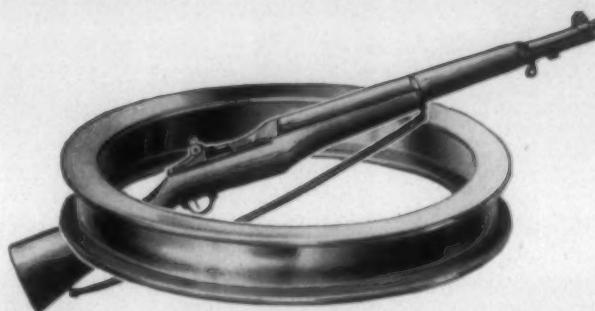
The Emmons Loom Harness Co. of Lawrence, Mass., manufacturers of Emmons Certified Steel Heddles, reeds and other harness equipment, has recently appointed N. Marvez as its Venezuela agent.

Mr. Marvez is located at Apartado 391 in Caracas. He is well known to the textile industry throughout Venezuela.

Besides representing the Emmons Loom Harness Co., Mr. Marvez also represents the Wellington Sears Co., Inc., Manufacturers Textile Export Co., Inc., and Noville Products Co., Inc.

A textile training center at Alabama Polytechnic Institute, Auburn, has been opened by the State Department of Education.

Intensive courses of six to eight weeks are to be provided, according to Rex Sullivan, of the Trade Industrial Education Division of the department, for specially selected employees of the Alabama mills.



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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

ABINGTON TEXTILE MACHINERY WORKS, Abington, Mass. Offices at Boston, Mass., and Charlotte, N. C.

ACME STEEL CO., 2828 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 603 Stewart Ave., S.W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carrell, 523 Clairmont Ave., Decatur, Ga. Phone Dearborn 6267; K. J. Pedersen, 301 W. 10th St. (Tel. 2-2903), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La. Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AKRON BELTING CO., THE, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN BLOWER CORP., P. O. Box 58, Roosevelt Park Annex, Detroit, Mich.; 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 309, Jahncke Bldg., 816 Howard Ave., New Orleans, La.; 619 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

AMERICAN CYANAMID & CHEMICAL CORP., 80 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkins Blvd., Charlotte, N. C., Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Harry L. Dalton, Mgr.

ARKANSAS CO., Inc., P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

ARNOLD, HOFFMAN & CO., INC., Providence, R. I. Sou. Headquarters, 1211 McCall St., Charlotte, N. C., Mgr., Walter T. Bunce, Phone 2-4073; Technical Service Men: Reid Tull, 116 W. Thomas St., Salisbury, N. C., Phone 1497-J; Philip L. Lavoie, 1211 McCall St., Charlotte, N. C.; John H. Graham, P. O. Box 904, Greenville, S. C., Phone 2922; John R. Brown, P. O. Box 749, Trussville, Ala., Phone 127; Warehouse, 1211 McCall St., Charlotte, N. C.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S.W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

ATWOOD MACHINE CO., Stonington, Conn. Sou. Rep.: Fred Sails, Johnston Bldg., Charlotte, N. C.

AUFFMORDT & CO., C. A., 468 Fourth Ave., New York City. Sou. Rep.: George B. Wilkinson, 613 Johnston Bldg., Charlotte, N. C.

BAHNSON CO., THE, 1901 S. Marshall St., Winston-Salem, N. C.; 886 Brewery St., Atlanta, Ga.

BANCROFT BELTING CO., Boston, Mass. Warehouse and Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C., J. H. Spencer, Mgr.

BARIUM REDUCTION CORP., S. Charleston, W. Va. Sou. Distributors: American Cyanamid & Chemical Corp.; F. H. Ross & Co., Charlotte, N. C.

BARKLEY MACHINE WORKS, Gastonia, N. C.

BARNES TEXTILE ASSOCIATES, Inc., 10 High St., Boston, Mass. Sou. Office, 318 Montgomery Bldg., Spartanburg, S. C.

BECCO SALES CORP., Buffalo, N. Y. Sou. Reps.: J. D. Quern and D. S. Quern, 1930 Harris Road, Charlotte, N. C.

BEST & CO., Inc., EDWARD H., Boston, Mass. Sou. Rep.: W. C. Hames, 185 Pinecrest Ave., Decatur, Ga. Phone Dearborn 5974; Ralph Gossett, William J. Moore, 15 Augusta St., Greenville, S. C., Phone 150.

BOND CO., CHAS., 617 Arch St., Philadelphia, Pa. Sou. Reps.: John C. Turner, 107 16th St., N.W., Phone Hemlock 2113, Atlanta, Ga.; Harold C. Smith, Poinsett Hotel, Greenville, S. C.

BORNE, SCRYMSER CO., Works and Offices, 632 S. Front St., Elizabeth, N. J.; Warehouse, 815 W. Morehead St., Charlotte, N. C. Sou. Mgr., H. L. Siever, Charlotte, N. C. Reps.: W. B. Uhler, Spartanburg, S. C.; R. C. Young, Charlotte, N. C.; John Ferguson, LaGrange, Ga.

BROOKLYN PERFEX CORP., Brooklyn, N. Y. Sou. Repr.: John Batson, Box 841, Greenville, S. C.

BROWN CO., THE DAVID, Lawrence, Mass. Sou. Reps.: Greenville, S. C., Ralph Gossett and Wm. J. Moore; Griffin, Ga., Belton C. Plowden; Dallas, Tex., Russell A. Singleton Co., Inc.; Gastonia, N. C., Gastonia Mill Supply Co.; Chattanooga, Tenn., James Supply Co.; Spartanburg, S. C., Montgomery & Crawford.

BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn. C. A. Schier, W. A. Bentel, W. J. Kelly, Jr., George S. McCarty, T. A. Martin, George Rodgers, care Burkart-Schier Chemical Co., Chattanooga, Tenn.; H. V. Wells, care Burkart-Schier Chemical Co., Nashville, Tenn.; Lawrence Newman, Claude V. Day, care Burkart-Schier Chemical Co., Knoxville, Tenn.; J. A. Brittain, 3526 Cliff Rd., Birmingham, Ala.; Byrd Miller, Woodside Bldg., Greenville, S. C.; Nelson A. Fisher, 1540 Elmdale Ave., Chicago, Ill.

BUTTERWORTH & SONS CO., H. W., Philadelphia, Pa. Sou. Repr.: J. H. Zahn, Johnston Bldg., Charlotte, N. C.

CAROLINA REFRactories CO., Hartsville, S. C.

CARTER TRAVELER CO., Gastonia, N. C. R. D. Hughes Sales Co., 2106 S. Lamar St., Dallas, Tex., Texas and Arkansas; Eastern Rep. (including Canada): C. E. Herrick, 44 Franklin St., Providence, R. I.; European Rep.: Mellor, Bromley & Co., Ltd., Leicester, England.

CHARLOTTE CHEMICAL LABORATORIES, Inc., Charlotte, N. C. Peter S. Gilchrist, Jr., Rep.

CIBA CO., Inc., Greenwich and Morton Sts., New York City. Sou. Offices and Warehouses, Charlotte, N. C.

CLINTON CO., Clinton, Iowa. Sou. Reps.: Luther Knowles, Box 127, Phone 2-2486, Charlotte, N. C.; Grady Gilbert, Box 342, Phone 3192, Concord, N. C.; Clinton Sales Co., Inc., Geo. B. Moore, Box 481, Phone 822, Spartanburg, S. C.; Boyce L. Estes, Box 323, Phone 469, LaGrange, Ga.; Gordon W. Enloe, P. O. Box 351, Gadson, Ala.; Harold P. Goller, 900 Woodside Bldg., Tel. 3718, Greenville, S. C. Stocks carried at Carolina Transfer and Storage Co., Charlotte, N. C.; Consolidated Brokerage Co., Greenville, S. C.; Bonded Service Warehouse, Atlanta, Ga.; Textile Products Distributing Co., Rock Hill, S. C.; Industrial Chemicals, Roanoke Rapids, N. C.

COCKER MACHINE & FOUNDRY CO., Gastonia, N. C.

COLE MFG. CO., R. D., Newnan, Ga.

CORN PRODUCTS REFINING CO., 17 Battery Place, New York City. Corn Products Sales Co., Southeastern Bldg., Greensboro, N. C., W. R. Joyner, Mgr.; Corn Products Sales Co., Montgomery Bldg., Spartanburg, S. C., J. Cantey Alexander, Mgr.; Corn Products Sales Co., Woodside Bldg., Greenville, S. C., J. Alden Simpson, Mgr.; Corn Products Sales Co. (Mill and Paper Starch Div.), Hurt Bldg., Atlanta, Ga., C. G. Stover, Mgr.; Corn Products Sales Co., Comer Bldg., Birmingham, Ala., L. H. Kelly, Mgr. Stocks carried at convenient points.

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CUTLER, ROGER W., 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Sou. Agts.: M. Bradford Hodges, 161 Spring St., N.W., Atlanta, Ga.; Jesse Hodges, 1336 E. Morehead St., Charlotte, N. C.; Byrd Miller, Woodside Bldg., Greenville, S. C.

DARY RING TRAVELER CO., Taunton, Mass. Sou. Rep.: John E. Humphries, P. O. Box 843, Greenville, S. C.; John H. O'Neill, P. O. Box 720, Atlanta, Ga.; H. Reid Lockman, P. O. Box 515, Spartanburg, S. C.

DAYTON RUBBER MFG. CO., Dayton, O. Sou. Reps.: J. O. Cole, P. O. Box 846, Greenville, S. C.; Kenneth Karns, P. O. Box 846, Greenville, S. C.; Thomas W. Meighan, 1304 Middlesex Ave., N.E., Atlanta, Ga.; T. A. Sizemore, 525 Grove St., Salisbury, N. C. Sou. Jobbers: Greenville Textile Supply Co., Greenville Belting Co., Greenville, S. C.; Textile Mill Supply Co., Charlotte, N. C.; Odell Mill Supply Co., Greensboro, N. C.; Young & Vann Supply Co., Birmingham, Ala.; Industrial Supply, Inc., LaGrange, Ga.; Textile Supply Co., Dallas, Tex.

DENISON MFG. CO., THE, Plant and Sales Offices, Asheville, N. C. Sou. Service Repr.: L. C. Denison, P. O. Box 4072, Asheville, N. C.

DIXIE TANK & BRIDGE CO., 2146 Lamar Ave., Memphis, Tenn., Tel. 4-6219; 337 Third National Bank Bldg., Nashville, Tenn.

DETERGENT PRODUCTS CO., 494 Spring St., N.W., Atlanta, Ga. Offices at: Columbia, S. C., Raleigh, N. C., Texarkana, Ark., Columbus, Ga.

DODENHOFF CO., W. D., 619 Rutherford St., Greenville, S. C.

DRAPER CORPORATION, Hopedale, Mass. Sou. Offices and Warehouses, Spartanburg, S. C.; Clare H. Draper, Jr.; Atlanta, Ga., 242 Forsyth St., S.W.; W. M. Mitchell.

DU PONT DE NEMOURS & CO., Inc., E. I., Electrochemicals Dept., Main Office, Wilmington, Del.; Charlotte Office, 414 S. Church St., Le-Roy Kennette, Dist. Sales Mgr. Reps.: J. L. Moore, Technical Man; N. P. Arnold, 2386 Alston Dr., Atlanta, Ga.; Technical Service Man; O. S. McCullers, 208 McPherson Lane, Greenville, S. C., Tech. Repr.

PAUL B. EATON, 218 Johnston Bldg., Charlotte, N. C.

EMMONS LOOM HARNESS CO., Lawrence, Mass. Sou. Plant, 118½ W. Fourth St., Charlotte, N. C.; George Field, Mgr.; Clifton E. Watson, Mgr. Sou. Sales. Wm. S. Taylor, Supt. Charlotte Plant, Box 2036, Tel. 3-7503; Arthur W. Harris, Harris Mfg. Co., Agt., P. O. Box 1982, Phone Main 2613, Atlanta, Ga.; Alvin Braley, Southwest Supply Co., Agt., P. O. Box 236, Phone 170, Itasca, Tex.

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FRANKLIN PROCESS CO., Providence, R. I. Sou. Plants, Southern Franklin Process Co., Greenville, S. C.; Central Franklin Process Co., Chattanooga, Tenn.

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GENERAL DYESTUFF CORP., 435 Hudson St., New York City. Sou. Office and Warehouse, 2459 Wilkinson Blvd., Charlotte, N. C., B. A. Stigen, Mgr.

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GOSSETT MACHINE WORKS, Franklin Ave., Ext., Gastonia, N. C.

GREENSBORO LOOM REED CO., Greensboro, N. C. Phone 5678. Geo. A. McFetters, Mgr., Phone 2-0205. A. A. "Red" Brame, Repr.

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HOUGHTON & CO., E. F., 303 W. Leigh Ave., Philadelphia, Pa. Sou. Reps.: W. H. Brinkley, Gen. Sales Mgr., Sou. Div., 1301 W. Morehead St., Charlotte, N. C. Sou. Reps.: C. L. Elgert, 7 St. Paul St., Baltimore, Md.; T. E. Hansen, Box 398, Glen Allen, Va.; S. P. Schwoyer, 302½ Otteray Drive, P. O. Box 1507, High Point, N. C.; C. G. Schultz, 1301 W. Morehead St., Charlotte, N. C.; L. L. Brooks, 100 Jones Ave., Greenville, S. C.; J. J. Reilly, 2788 Peachtree Road, Atlanta, Ga.; V. C. Shaden, P. O. Box 935, Chattanooga, Tenn.; J. W. Byrnes, 701 N. San Jacinto, Houston, Tex.; H. J. Reid, 212 Lamont Drive, Decatur, Ga. (Size Demonstrator); W. C. McMann, Textiles Sales Dept., 1301 W. Morehead St., Charlotte, N. C.; W. A. Isenberg, Lubrication Engineer, 1301 W. Morehead St., Charlotte, N. C.

HOUGHTON WOOL CO., 258 Summer St., Phone Liberty 1875, Boston, Mass. Sou. Rep.: Jas. E. Taylor, P. O. Box 2084, Phone 3-3692, Charlotte, N. C.

HOWARD BROS. CO., Worcester, Mass. Sou. Office and Plant, 244 Forsyth St., S.W., Atlanta, Ga.; Guy L. Melchor, Sou. Agent; S. W. Reps.: Russell A. Singleton Co., Inc., Mail Route 5, Dallas, Tex.; J. Floyd Childs, 244 Forsyth St., S.W., Atlanta, Ga.; Carl M. Moore, 823 York St., Gastonia, N. C.

IDEAL MACHINE CO., Bessemer City, N. C.

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JARRETT & CO., CECIL H., Newton, N. C.

JENKINS METAL SHOP, Gastonia, N. C.

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JOHNSON & SON, Inc., S. C., Industrial Wax Div., Racine, Wis. Sou. Reps.: H. J. Chapman, Sou. Mgr. for Textile Finishes; S. C. Johnson & Son, Inc., 726 Ponce de Leon Place, N.E., Phone Hemlock 0448, Atlanta, Ga.

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KEMPTON PARTS & SPRING CO., Ed. S. Kempton, 832-34 N. Marietta St., Gastonia, N. C.

KEYSTONE BELTING CO., 213 N. Third St., Philadelphia, Pa. Sou. Rep.: T. J. Digby, Jr., P. O. Box 244, Greer, S. C.

LAMBETH ROPE CORP., New Bedford, Mass. Charlotte Repr.: Frank Burke. Phone 3-4287.

LAUREL SOAP MFG. CO., Inc., 2607 E. Tioga St., Philadelphia, Pa. Sou. Reps.: A. Henry Gaede, P. O. Box 1083, Charlotte, N. C.; W. R. Sargent, P. O. Box 1044, Greenville, S. C.

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LOPER CO., RALPH E., 500 Woodside Bldg., Greenville, S. C. New England Office, Buffington Bldg., Fall River, Mass.

MAGUIRE & CO., JOHN P., 370 Fourth Ave., New York City. Sou. Rep.: Taylor R. Durham, Liberty Life Bldg., Charlotte, N. C.

MATHIESON ALKALI WORKS, INC., THE, 60 East 42nd St., New York City. Southeastern Dist. Sales Office: Liberty Life Bldg., Charlotte, N. C.; Fred O. Tilson, Sou. Dist. Sales Mgr. Reps.: R. C. Staples, Z. N. Holler, J. W. Ivey, Frank Thomas, John Staples, Vernon Woodside, Harold Dinges.

MEADOWS MFG. CO., P. O. Box 4354, Atlanta, Ga.

MERROW MACHINE CO., THE, 8 Laurel St., Hartford, Conn. Hollister-Moreland Co., P. O. Box 721, Spartanburg, S. C.

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MORELAND CHEMICAL CO., 314 W. Henry St., Spartanburg, S. C. Paul C. Thomas, Treas. and Gen. Mgr.

MILLER, BYRD, Manufacturers' Agent, Woodside Bldg., Greenville, S. C.

NATIONAL ANILINE DIVISION, Allied Chemical & Dye Corp. General Office, 40 Rector St., New York City. Julian T. Chase, Res. Mgr., 201 W. First St., Charlotte, N. C.; Kenneth Mackenzie, Asst. to Res. Mgr., 201 W. First St., Charlotte, N. C. Salesmen: D. S. Moss, W. L. Barker, R. B. Murdoch, Harry L. Shinn, A. R. Akerstrom, 201 W. First St., Charlotte, N. C.; J. H. Shuford, Jefferson Standard Bldg., Greensboro, N. C.; H. A. Rodgers, 1202 James Bldg., Chattanooga, Tenn.; J. I. White, American Savings Bank Bldg., Atlanta, Ga.; W. H. Jackson, Apt. 10-A, Country Club Apts., Columbus, Ga.

NATIONAL RING TRAVELER CO., 354 Pine St., Pawtucket, R. I. Sou. Office and Warehouse, 151 W. First St., Charlotte, N. C. Sou. Agt., L. E. Taylor, Charlotte, N. C. Sou. Reps.: Otto Pratt, Union Mills, N. C.; H. B. Askew, Box 272, Atlanta, Ga.; Wm. S. Johnstone, P. O. Box 998, Gastonia, N. C.

NEW ENGLAND BOBBIN & SHUTTLE CO., Nashua, N. H. Sou. Reps.: Charlotte Supply Co., Charlotte, N. C.; Industrial Supply Co., Inc., Clinton, S. C.; W. G. Hamner, Box 267, Gastonia, N. C.; A. G. Murdaugh, Griffin, Ga.

N. Y. & N. J. LUBRICANT CO., 292 Madison Ave., New York City. Sou. Office, 1800 W. Morehead St., Phone 3-7191, Charlotte, N. C., Spartanburg, S. C., Atlanta, Ga., Greenville, S. C. Falls L. Thomason, Sou. Dist. Mgr.

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NORTH. FRANK G., Inc., P. O. Box 92, Marietta, Ga.; P. O. Box 844, Atlanta, Ga. Reps.: W. W. Greer, P. O. Box 336, Greenville, S. C.; W. J. Greer, P. O. Box 305, Greenville, S. C.

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PITTSBURGH PLATE GLASS CO., Columbia Chemical Div., Grant Bldg., Pittsburgh, Pa. Dist. Sales Office, 615 Johnston Bldg., Charlotte, N. C.; James R. Simpson, Dist. Sales Mgr.

PRICE SPINDLE & FLYER CO., Spartanburg, S. C.

PROCTOR & SCHWARTZ, Inc., Philadelphia, Pa. Sou. Office, Johnston Bldg., Charlotte, N. C.

PROVIDENT LIFE & ACCIDENT INS. CO. (Group Accident and Health and Welfare Plans Div.), Chattanooga, Tenn. Southeastern Div. Office, 815 Commercial Bank Bldg., Gastonia, N. C.

RAGAN RING CO., Atlanta, Ga.

RAY CHEMICAL CO., 2316 S. Blvd., Charlotte, N. C.

ROHM & HAAS CO., 222 W. Washington Square, Philadelphia, Pa. Sou. Office: P. H. Del Plaine, Dist. Mgr., 1109 Independence Bldg., Charlotte, N. C., Phone 2-8291; A. K. Haynes, 1811 Meadowdale Ave., N.E., Atlanta, Ga. Phone 2619.

ROY & SON CO., B. S., Worcester, Mass. Sou. Office, Box 1045, Greenville, S. C., Jack Roy, Rep.; Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Textile Supply Co., Dallas, Tex.

SACO-LOWELL SHOPS, 60 Batterymarch St., Boston, Mass. Sou. Office and Supply Depot, Charlotte, N. C.; Walter W. Gayle, Sou. Agt.; Atlanta, Ga.; John L. Graves and Miles A. Comer, Selling Agts.; Greenville, S. C.; H. P. Worth, Selling Agt.

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SHINGLE & GIBB LEATHER CO., Philadelphia, Pa.

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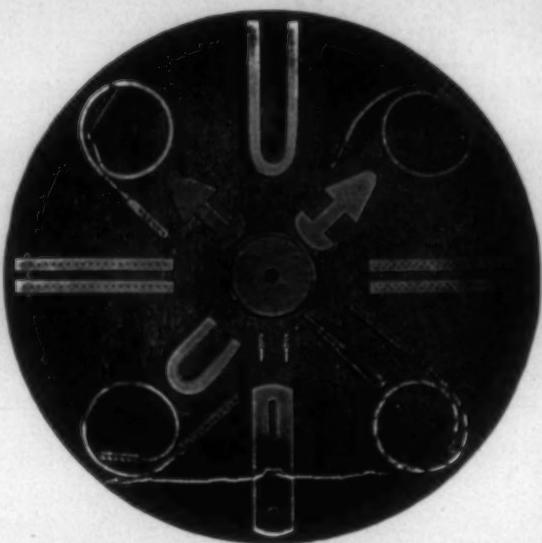


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